



I'M SPEAKING AT

ODTUG  
Kscope19



SEATTLE, WASHINGTON • JUNE 23-27

[www.kscope19.odtug.com](http://www.kscope19.odtug.com)



SEATTLE

 Washington State  
Convention Center



# The ABCs and 123s of OAC!

# Agenda

What We'll Cover Today

1. Introduction
2. OAC Components
3. Essbase Cloud and Visualization Deep Dive
4. Recommendations and Takeaways
5. Q&A

# About Nick Scott

## Principal, SC&H Group

- **Working in Consulting for 11+ Years**

- Specialize in Planning and Budgeting, BI/Analytics, Integrations and Process Automation
- Created/leads our Hyperion Infrastructure practice
- Managed our largest projects, including deployment of PBCS at Hilton to 2,400 users world-wide
- Specialize in the following industries: Hospitality, Manufacturing, Aerospace & Defense

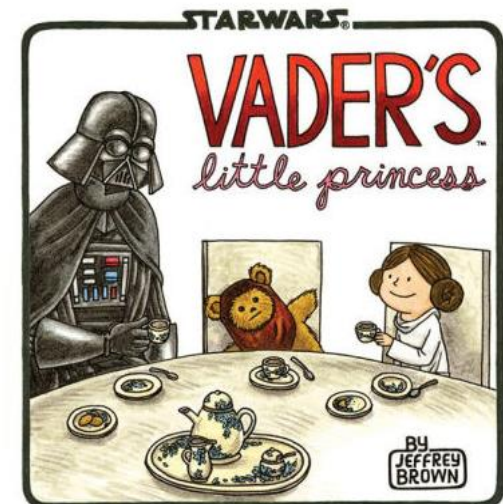
- **Two Daughters – Lacey (4) & Amber (1)**

- Specialize in Frozen, Moana and The Little Mermaid with a strong knowledge of all things Disney
- Actively converting both daughters to be Star Wars nerds like their Dad

**Day =**



**Night =**



OVERVIEW

# About SC&H Group



---

# Oracle Analytics Cloud (OAC)

Overview

# OAC Overview – White Glove Explanation

---

***Studies show that humans respond to visuals better than any other type of stimuli. The human brain processes visual information 60,000 times faster than text. In fact, visual data accounts for 90 percent of the information transmitted to the brain.***

# OAC Overview – White Glove Explanation

## Vision and Strategy: Autonomous Analytics Powers All Actions to Be Data-Driven

Three primary design objectives guide our autonomous analytics strategy.

### Expand Insights Consumption **1**

To drive broad consumption, we make it easy for everyone to interact with information so that you can engage, analyze, and act in a way that is natural—asking questions in plain language, searching for answers, and receiving insights as narration. Cut through information overload with relevant, personalized insights, delivered proactively to you in the context that makes the most sense.

### Power Deeper Insights **2**

Systems must provide autonomous capabilities that help you dig deeper into your information, explaining drivers of performance, uncovering hidden patterns, and helping you get more from your data. Use these insights to model new scenarios, make intelligent decisions, and amplify insights through collaboration and social sharing.

### Accelerate Time to Action **3**

It's critical to remove constraints on time and scale. You must condense the time it takes to go from raw data to insight to action. Many previous systems were designed for a limited set of use cases, and computing infrastructure was complex and costly to change. Our strategy is to create one platform for a broad range of business use cases, all integrated into a common data and analytics metaphor.



# OAC Overview – Blue Collar Explanation

---

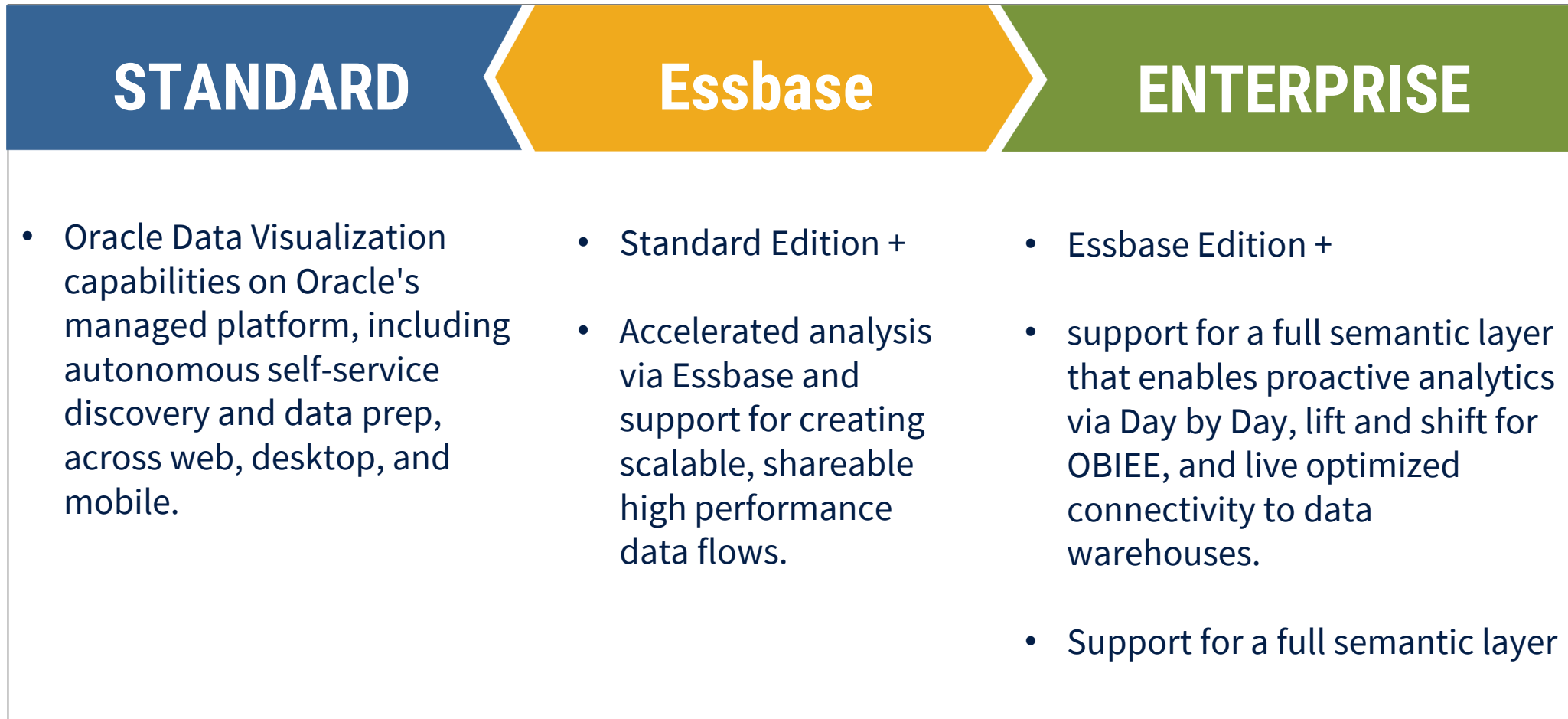
- **Oracle's Cloud offering for all things BI and Analytics**
- **Combines Oracle's BI Platforms with the Essbase Cloud Service**
  - Oracle Business Intelligence Cloud Service (BICS)
  - Oracle Data Visualization Cloud Service (DVCS)
    - DV Desktop
  - Essbase Cloud (EssCs)
- **Platform-as-a-Service (PAAS) Solution which means Oracle still hosts the environment, but gives more flexibility in regards to:**
  - Security configurations
  - Server-side access
  - Control over environment scaling and patching
  - Oracle does offer full autonomous versions for hands-off platform management

## Random Disney Princess Trivia

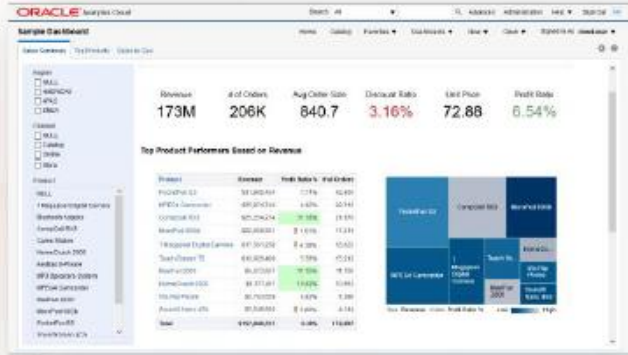
What is Moana's pet pig's name?



# Product Editions



# Architecture



Dashboards & Reports



Mobile

Data Sources:



## Oracle Analytics Cloud

### Data Analysis and Collaboration

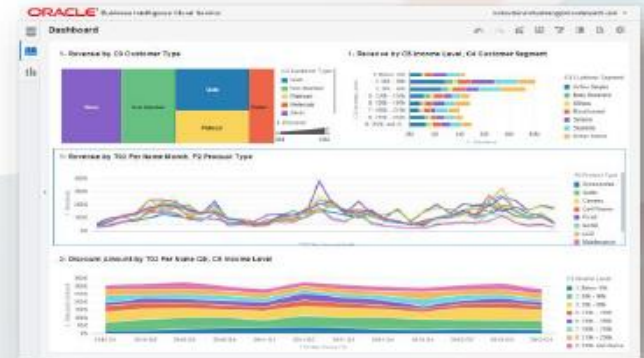
Explore and discover using natural language, visualization, & storytelling

### Data Preparation

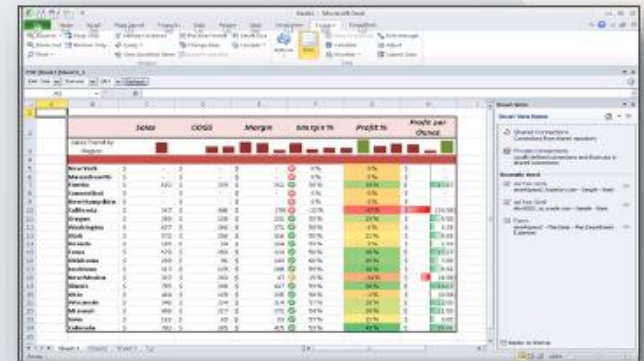
Prepare enriched, sharable, & reliable data sets

### Data and Model Catalog

One place to collect, search, explore & curate all data, Self Service along side enterprise semantics.

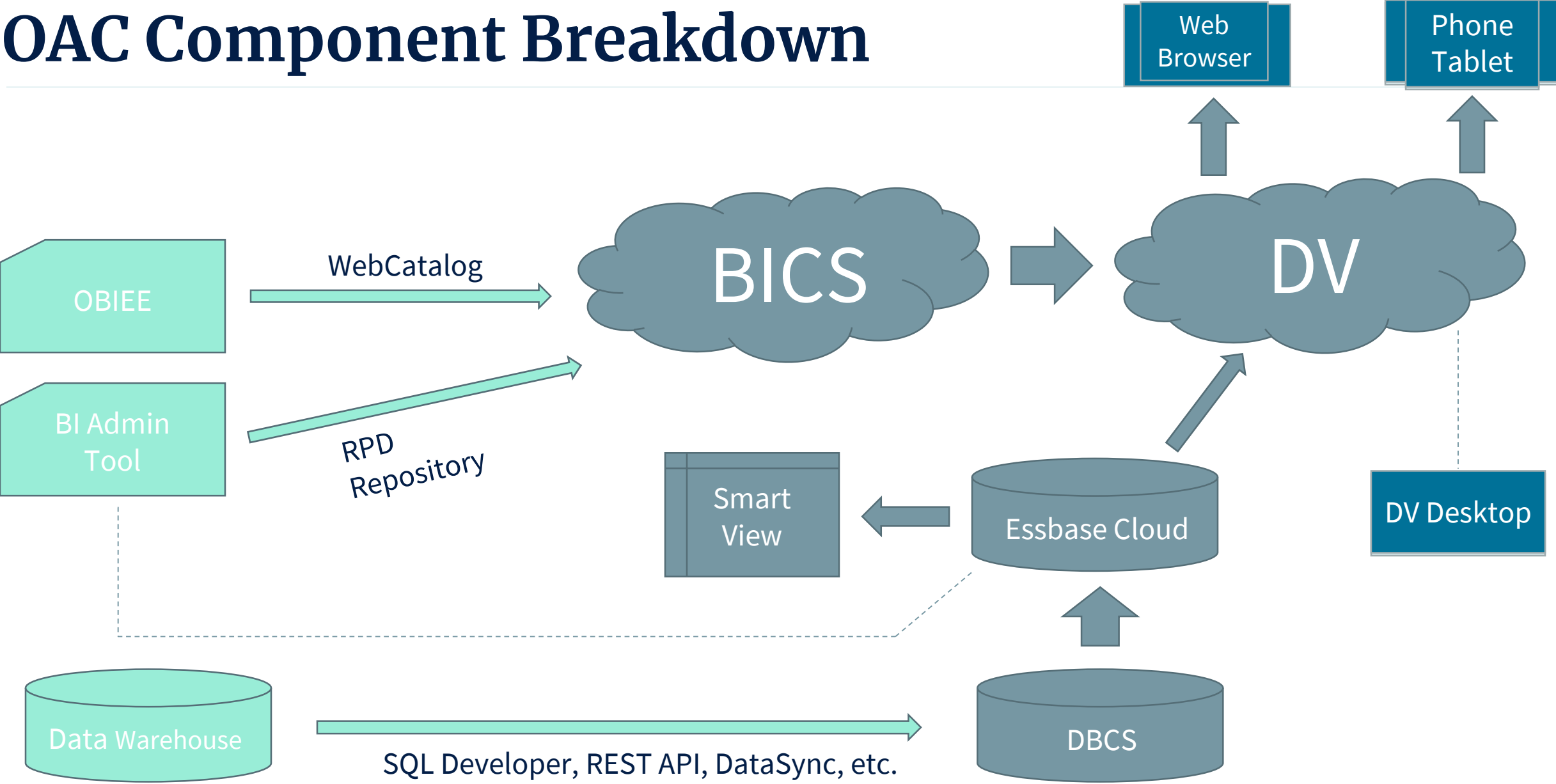


Data Visualization



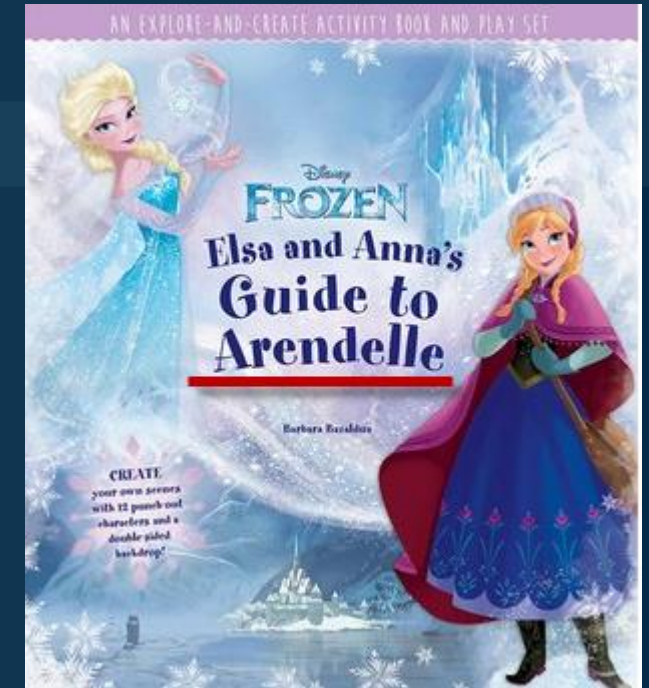
Essbase/SmartView

# OAC Component Breakdown



# Random Disney Princess Trivia

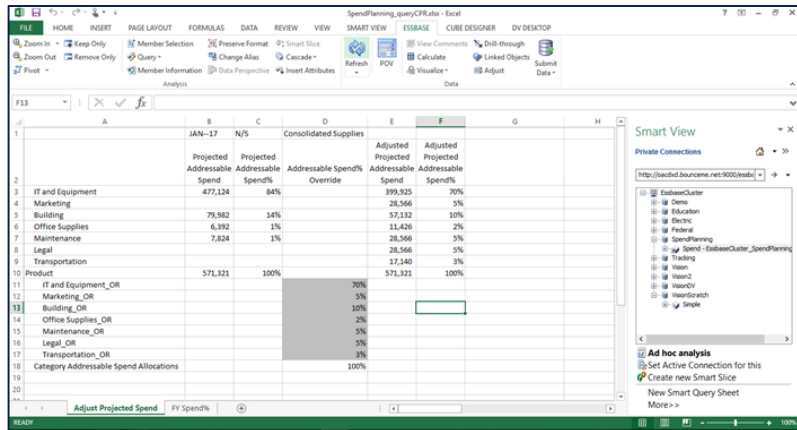
Where are Anna and Elsa from?



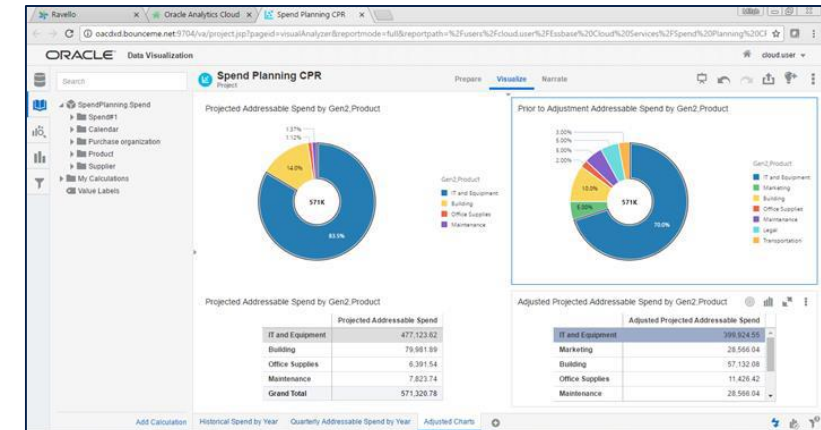
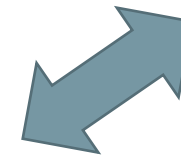
# OAC – Essbase Cloud Service

# Essbase Cloud Service - Overview

- Classic Essbase running on modernized architecture in the cloud
- Excel integration includes cube designer to accompany standard Smart View functionality
- Integration with Data Visualization
- Sandbox for scenario analysis/what-if



	JAN-17	N/S	Consolidated Supplies	Adjusted Projected Spend	Adjusted Projected Addressable Spend
IT and Equipment	477,124	84%		399,925	70%
Marketing	79,982	14%		57,132	10%
Office Supplies	6,392	1%		11,429	2%
Maintenance	7,824	1%		28,566	5%
Legal				28,566	5%
Transportation				17,140	3%
Product	571,321	100%		571,321	100%
IT and Equipment_OR					70%
Marketing_OR					5%
Building_OR					10%
Office Supplies_OR					2%
Maintenance_OR					5%
Legal_OR					5%
Transportation_OR					3%
Category Addressable Spend Allocations			100%		





# Essbase Cloud Service – Console

- Known as the “Modern Interface” and is the cloud equivalent of EAS
- Access all of your applications and their components
  - Metadata
  - Calc Scripts
  - Config File
  - Logs
  - Data Load Rules
  - Reports Scripts
  - Security Filters
  - Etc.

The screenshot displays the Oracle Analytics Cloud - Essbase console interface. The main window shows the 'Sample.Basic -- Outline' view. A table lists various outline members with columns for Name, CO, Data Storage Type, Formula, and Description. The 'Sales' member is highlighted. A right-hand pane shows the 'Sales' member's properties, including Name, General, and various settings like Active Alias Name, Consolidation, and Data Storage Type.

Name	CO	Data Storage Type	Formula	Description
▶ Year		Dynamic Calculation		
▶ Measures		Label Only		
▶ Profit	+ (Add)	Dynamic Calculation		
▶ Margin	+ (Add)	Dynamic Calculation		
▶ Sales	+ (Add)	Store Data		
▶ COGS	- (Subtract)	Store Data		
▶ Total Expenses	- (Subtract)	Dynamic Calculation		
▶ Inventory	~ (Ignore)	Label Only		
▶ Ratios	~ (Ignore)	Label Only		
▶ Product		Store Data		
▶ Market		Store Data		
▶ Scenario		Label Only		
▶ Caffeinated		Dynamic Calculation		
▶ Ounces		Dynamic Calculation		
▶ Pkg Type		Dynamic Calculation		
▶ Population		Dynamic Calculation		
▶ Intro Date		Dynamic Calculation		

# Essbase Cloud Service – Config and Stats

ORACLE Analytics Cloud - Essbase admin

Applications Jobs Files Scenarios Security Sources Console Academy

**Console** Configuration

Desktop Tools Global Provider Services

Email Configuration Refresh

Logs

File Scanner

Sessions

Settings

Database Size Stat...

Configuration

Variables

ODBC Settings

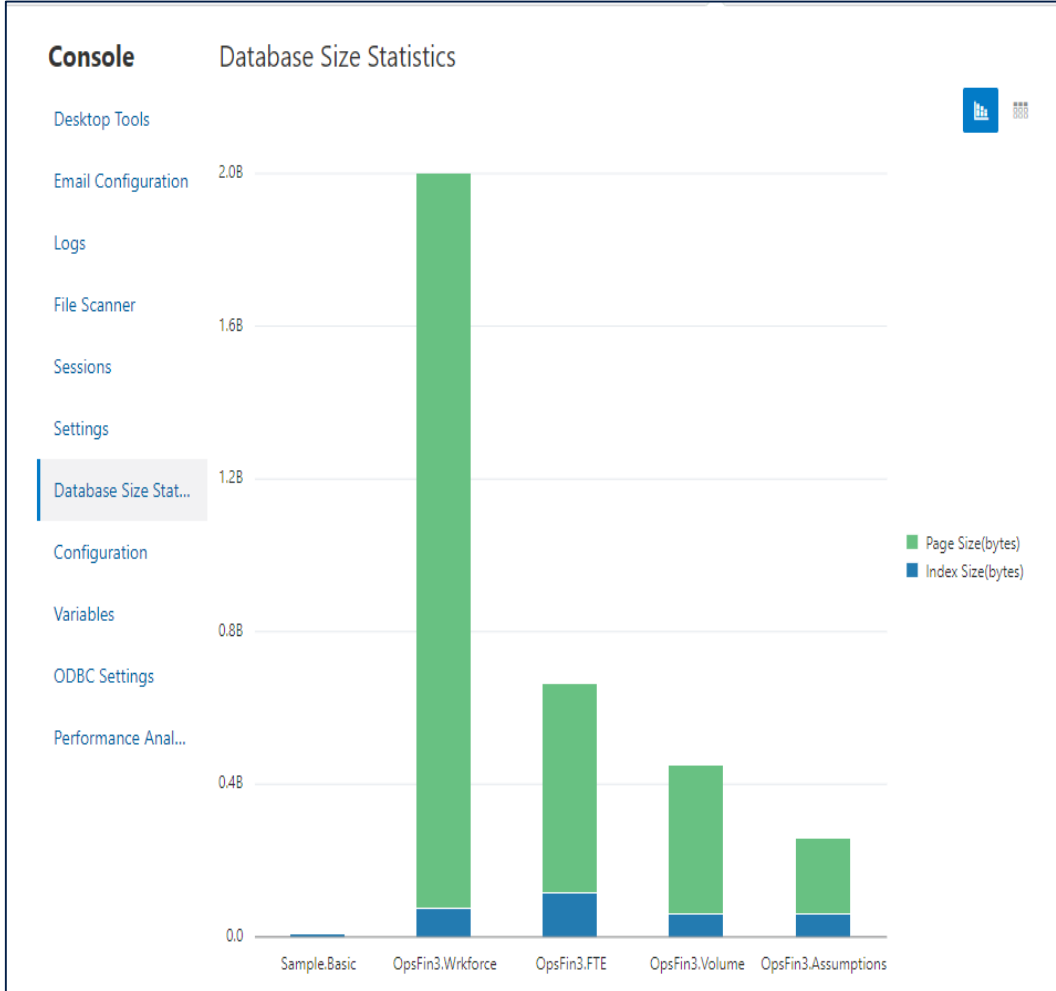
Performance Anal...

```

SERVERTHREADS 60
CALCLOCKBLOCKHIGH 10000
CALCLOCKBLOCKLOW 10000
CALCLOCKBLOCKDEFAULT 10000
IMPLIED_SHARE FALSE
ASODYNAMICAGGINBSO FULL

; -- OPSS specific settings below --
FUSIONAPPID      obi-template
AUTHENTICATIONMODULE OPSS_NATIVE

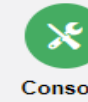
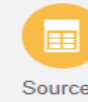
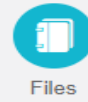
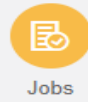
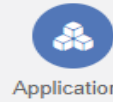
UnicodeEnable
AGENTDESC hypservice
; https://en.wikipedia.org/wiki/Ephemeral_port
; Many Linux kernels use the port range 32768 to 61000
; If certain server software is used, that uses non ephemeral custom port
; ranges for initiating some further connections, it needs to be ensured by
; configuration that this custom port range and the ephemeral port range do
; not overlap.
; It is decided to move application ports to 2000 lower
SERVERPORTBEGIN 30768
SERVERPORTEND 31768
CRASHDUMP TRUE
CRASHDUMPLLOCATION /u01/data/logs/workspace/log/crash
    
```



# Essbase Cloud Service - Logs

The screenshot displays the Oracle Analytics Cloud - Essbase interface. At the top, the Oracle logo and 'Analytics Cloud - Essbase' are visible, along with a user profile 'admin'. A navigation bar contains icons for Applications, Jobs, Files, Scenarios, Security, Sources, Console (highlighted), and Academy. The main content area is titled 'Console' and 'Logs'. On the left, a sidebar lists various tools, with 'Logs' selected. The main area shows a list of log entries: Managed Server, Console Output, Provider Services, Agent, Platform, and Security. The 'Managed Server' entry is highlighted in blue, and a context menu is open over it, showing options: 'Download All', 'Download Latest', and 'View Logs'.

# Essbase Cloud Service – Tools and Utilities



## Console

Desktop Tools

Email Configuration

Logs

File Scanner

Sessions

Settings

Database Size Statistics

Configuration

Variables

ODBC Settings

Performance Analyzer

## Desktop Tools

### Command Line Tools

#### Export Utility

Command-line tool for exporting the outline of a cube, and optionally other elements, into a formatted Excel workbook template

#### Life Cycle Management

Backup and restore the Essbase artifacts

#### Command-line Tool

Command-line Tool for Essbase platform

#### Migration Utility

Command-line tool for migrating Essbase applications, elements and users between cloud instances

### Smart View

### Maxl Clients

#### Essbase Maxl Client

Essbase Maxl Client for Winamd64

#### Essbase Linux Maxl Client

Essbase Maxl Client for Linuxamd64

### Essbase Clients

### Essbase JAPI

#### Essbase Java API

Essbase Java API library, samples and Java documentation

# Essbase Cloud Service – Cube Designer

- My favorite feature of Essbase Cloud
- Can export an entire cube to an Excel workbook
- Manage metadata, member formulas, outline parameters etc.,
- Edit existing cubes or use the workbooks to create a an entirely new cube
- Similar to managing metadata in Smart View for Planning/PBCS/FCCS

	A	B	C	D	E	F
Application Name		<b>Sample</b>				
Database Name		<b>Basic</b>				
Version		1.0				
<b>Dimension Definitions</b>						
		<b>Dimension Type</b>	<b>Storage Type</b>	<b>Outline Order</b>	<b>Base Dimension</b>	
Year		Time	Dense		1	
Measures		Accounts	Dense		2	
Product		Regular	Sparse		3	
Market		Regular	Sparse		4	
Scenario		Regular	Dense		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	

Dimension Name	<b>Measures</b>									
<b>Definitions</b>										
File Name	Dim_Measures		<b>Delimiter</b>	,						
Rule Name	Measures		<b>Header Rows to Skip</b>	0						
Build Method	PARENT-CHILD		<b>Allow Moves</b>	No						
Incremental Mode	Merge									
<b>Members</b>										
Columns	PARENT	CHILD	STORAGE	CONSOLIDATION	TWOPASSCALC	TIMEBALANCE	VARIANCEREPORT	FORMULA	ALIAS.Long Names	
	Measures	Inventory	O	~						
	Inventory	Opening Inventory				F	E	IF(NOT @ISMBR(Jan))"Opening Inventory"=@PRIOR("Ending Inventory"); ENDIF; "Ending Inventory"="Opening Inventory"+Additions-Sales;		
	Inventory	Additions		~			F			

# Essbase Cloud Service – Scenario Modeling

- New feature with Essbase in the Cloud - Sandboxing and Scenario Management
- Can create private copy data for “what-if” and sensitivity analysis
- Ability to refresh from the base data or merge the sandbox into base
- How it works:
  - When first created, sandbox member intersections are all virtual and have no physical storage.
    - The physical data from the cube is stored in the Base member slice
    - Querying new sandbox members dynamically reflects the values stored in the Base
  - Each scenario is a virtual slice of a cube in which one or more users can model data and then commit or discard the changes
  - Security and filters apply to the Sandbox dimension

# Essbase Cloud Service – Migrating

- The Life Cycle Management (LCM) utility can be used to import/move cube artifacts from on-prem Essbase to OAC.
  - Exceptions include cross cube features like XREF and Partitions
  - Only 11.1.2.3 and 11.1.2.4 environments are supported
- Automation and Integration artifacts (such as MaxL) need to be manually migrated to the Essbase Cloud client utilities
- Security is administered much like other Oracle EPM cloud applications
  - Environment based roles - administrator, power user, and user
  - Application level roles - application administrator, database administrator, update, and access
  - Encryption - Essbase content is encrypted and once it's ingested

# Random Disney Princess Trivia

What is a DingleHopper?

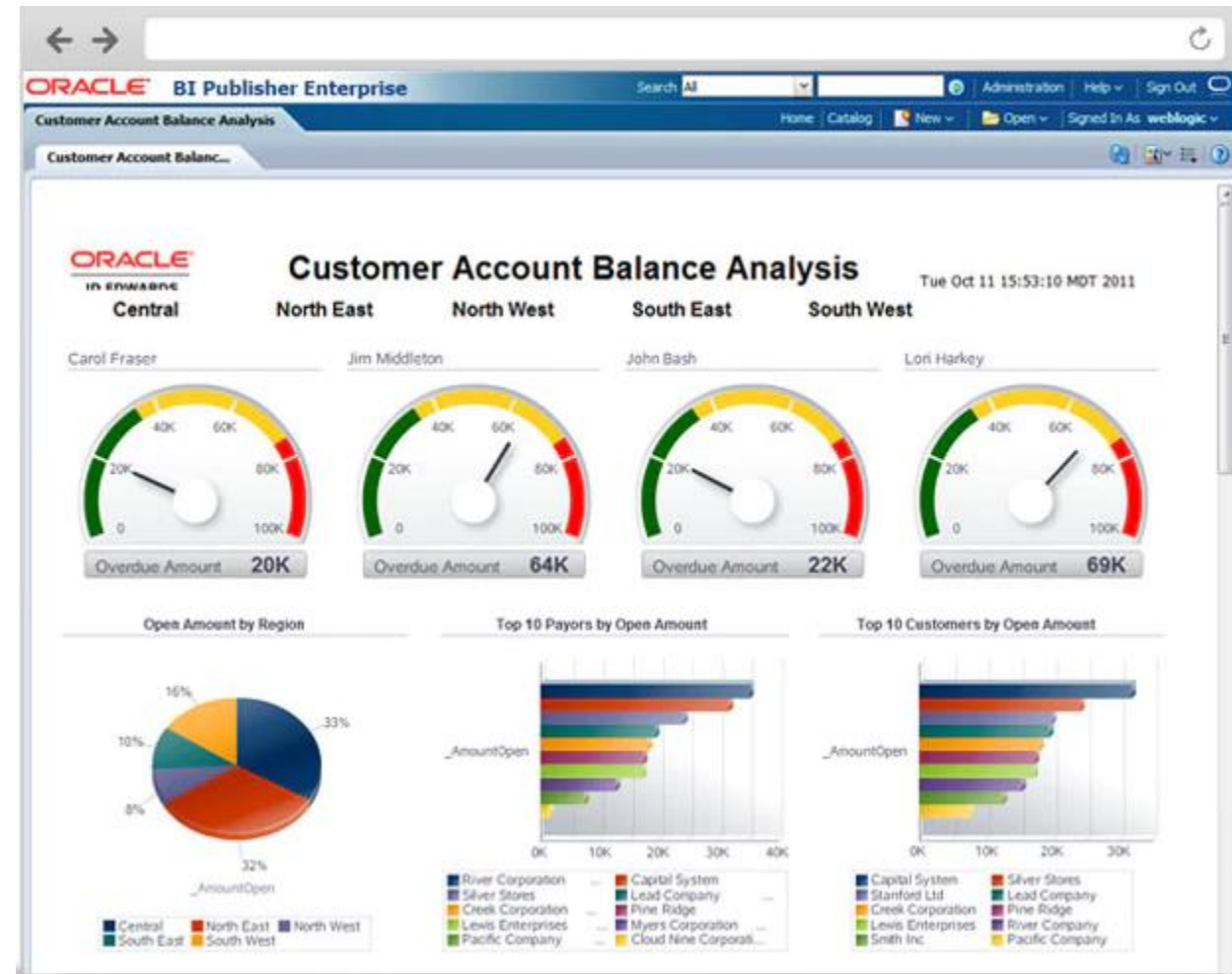




# OAC – Enterprise Components (BICS and Day by Day)

# BICS = OBIEE in the Cloud + More

- Traditional OBIEE Dashboards and BI Publisher
  - Suited for more static views with some interactive capabilities
  - Can be migrated from on-prem OBIEE
- BI Admin Tool for connection to cloud and on-prem data sources
- Can utilize local RPD or new RPD online connector tool



# Day by Day App

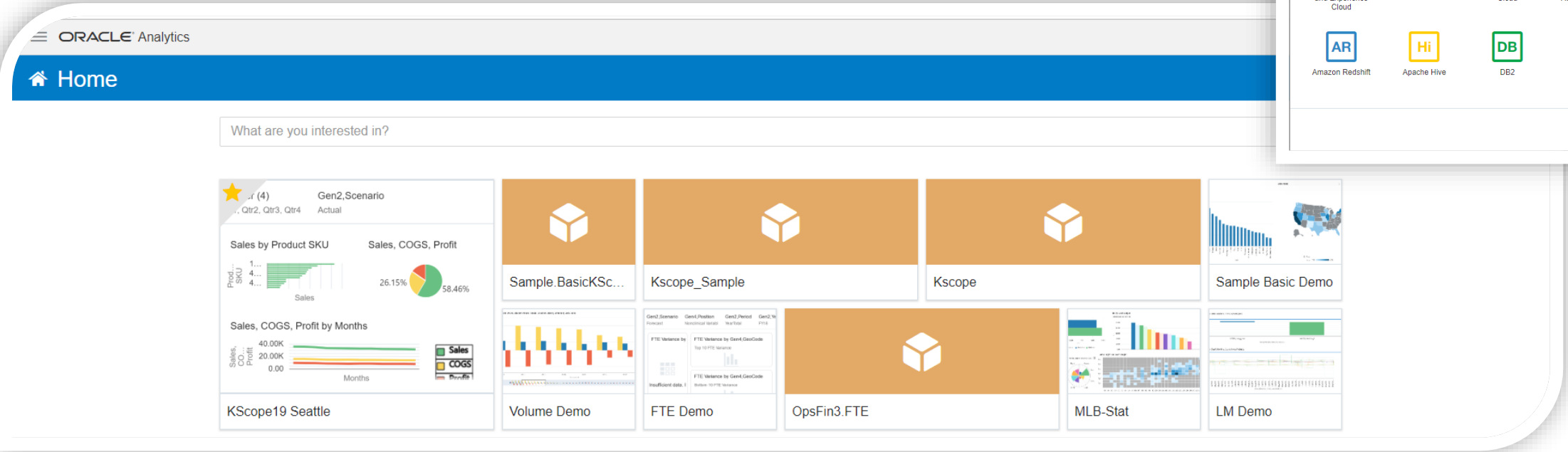
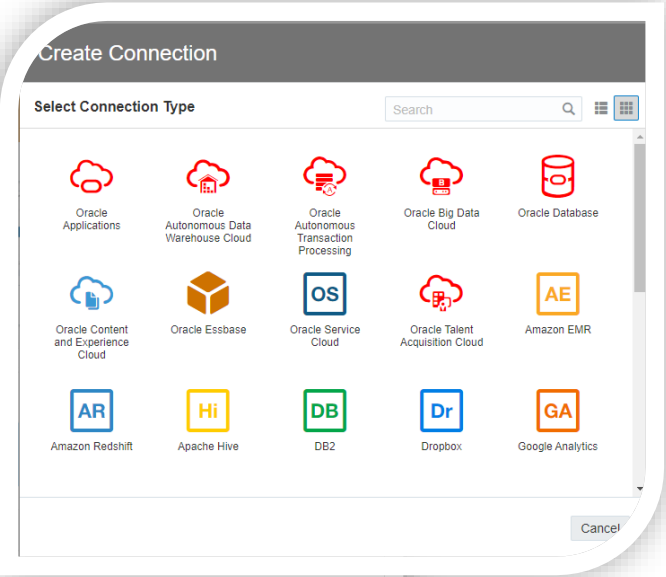
- Delivers analytics throughout the day based on what's going on in your business, in your day, and who you collaborate with
- Quickly get answers to your business questions, simply by doing a search or via voice commands
  - BY asking a questions the Oracle Day by Day engine will prepare an analytic summary
- Make public comments, create private discussions and even share insights via third-party apps.



# OAC – Data Visualization Cloud Service

# Data Visualization - Overview

- Self-service data visualization that connects to a variety of data sources
- Users can create and manage:
  - Projects
  - Data Sets
  - Data Flows



# Data Visualization – Data Prep

ORACLE Analytics Cloud

### OfficeSupplies - Data Set

Preparation Script

Results - Applying Script

OrderDate	Region	Rep	Item	Units	Unit Price
4-Jul-2014	East	Richard	Pen Set	62	4.99
12-Jul-2014	East	Nick	Binder	29	1.99
21-Jul-2014	Central	Morgan	Pen Set	55	12.49
29-Jul-2014	East	Susan	Binder	81	19.99
7-Aug-2014	Central	Matthew	Pen Set	42	23.95
15-Aug-2014	East	Richard	Pencil	35	4.99
24-Aug-2014	West	James	Desk	3	275.00
1-Sep-2014	Central	Smith	Desk	2	125.00
10-Sep-2014	Central	Bill	Pencil	7	1.29

Enrich Rep with gender

ORACLE Analytics Cloud

### OfficeSupplies - Data Set

Preparation Script

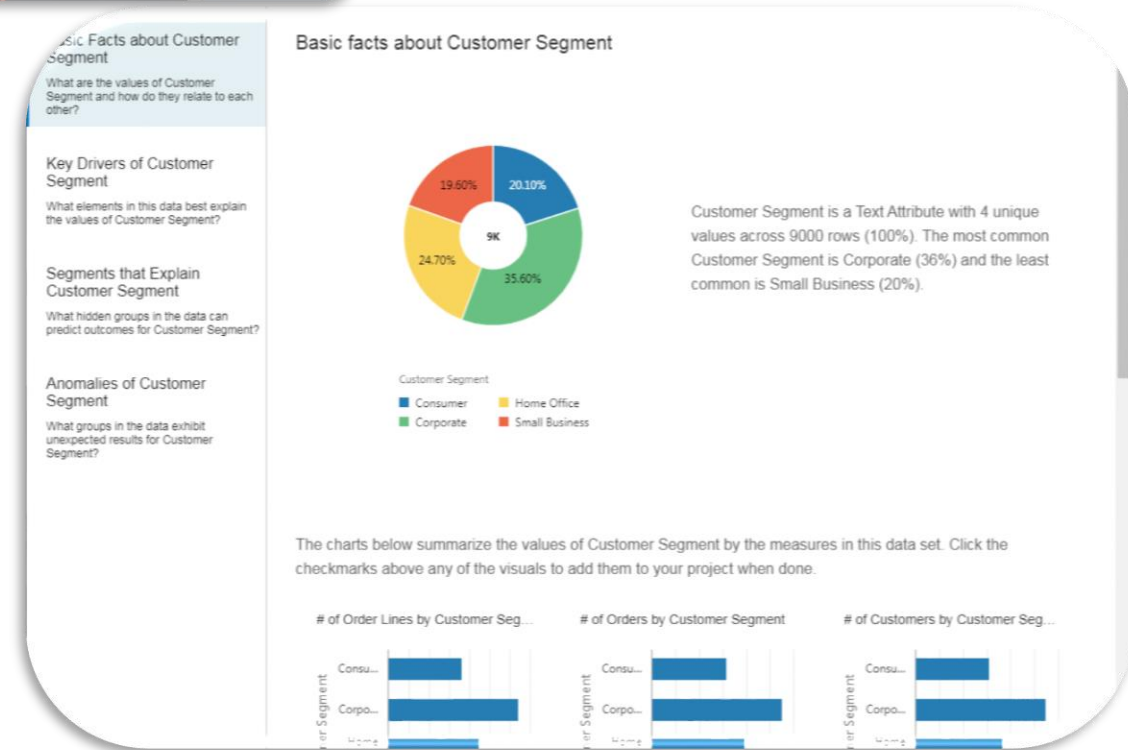
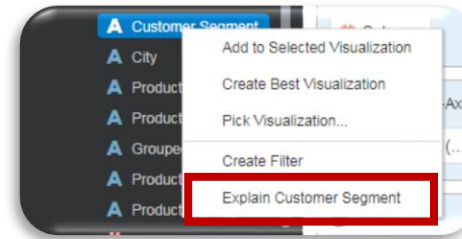
Enrichment Insert - From ...

OrderDate	Region	Rep	Rep_gender	Item	Units
4-Jul-2014	East	Richard	MALE	Pen Set	62
12-Jul-2014	East	Nick	MALE	Binder	29
21-Jul-2014	Central	Morgan	MALE	Pen Set	55
29-Jul-2014	East	Susan	FEMALE	Binder	81
7-Aug-2014	Central	Matthew	MALE	Pen Set	42
15-Aug-2014	East	Richard	MALE	Pencil	35
24-Aug-2014	West	James	MALE	Desk	3
1-Sep-2014	Central	Smith		Desk	2
10-Sep-2014	Central	Bill	MALE	Pencil	7

Enrich Rep with gender

# Data Visualization - Machine Learning

- “Explain” Feature in OAC Data Visualization uses Machine Learning to recognize the patterns and trends in your data set
- Analyzes and processes technical and statistical complexity and the volume and variety of data
- Identify and analyze key segments of behavior
- Discover Anomalies/outliers quickly
- Can subsequently use these visual insights and statistical analysis in your project visualization



# Data Flows and Predictive Modeling

The visualization shows a data flow starting with two source nodes: 'sp order li...' and 'sp states'. These connect to a 'Join' step, followed by 'Add Columns', and then a 'Filter' step. The final output is directed to a 'Save Data' node. Below this is the 'Save Data Set' configuration panel.

**Save Data Set**

Name: sp orders states

Description: [Empty]

Save data to: Database Connection

Connection: Big Data Cloud Connection

Table: sp\_orders\_states

When run: Replace existing data

When Run:  Prompt to specify Data Set

Name	Database Name	Treat As	Default Aggregation
order_line_id	ORDER_LINE_ID	Attribute	
city	CITY	Attribute	
customer_id	CUSTOMER_ID	Attribute	
customer_name	CUSTOMER_NAME	Attribute	
customer_segment	CUSTOMER_SEGMENT	Attribute	
discount	DISCOUNT	Measure	Sum

The screenshot shows the Oracle Analytics interface. The main page is titled 'Test Data Flow'. On the left, there is a 'Data Flow Steps' sidebar with the following options: Save Data Set, Create Essbase Cube, Add Columns, Select Columns, Rename Columns, Transform Column, Merge Columns, Bin, Group, Branch, Cumulative Value, Time Series Forecast, and Analyze Sentiment. A dialog box titled 'Select Train Numeric Prediction Model Script' is open, displaying a search bar and a list of model training options: CART for Numeric Prediction training, Linear Regression for model training, Random Forest for Numeric model training, and Elastic Net Linear Regression for model training. The dialog box has 'Cancel' and 'OK' buttons at the bottom right.





## Random Disney Princess Trivia

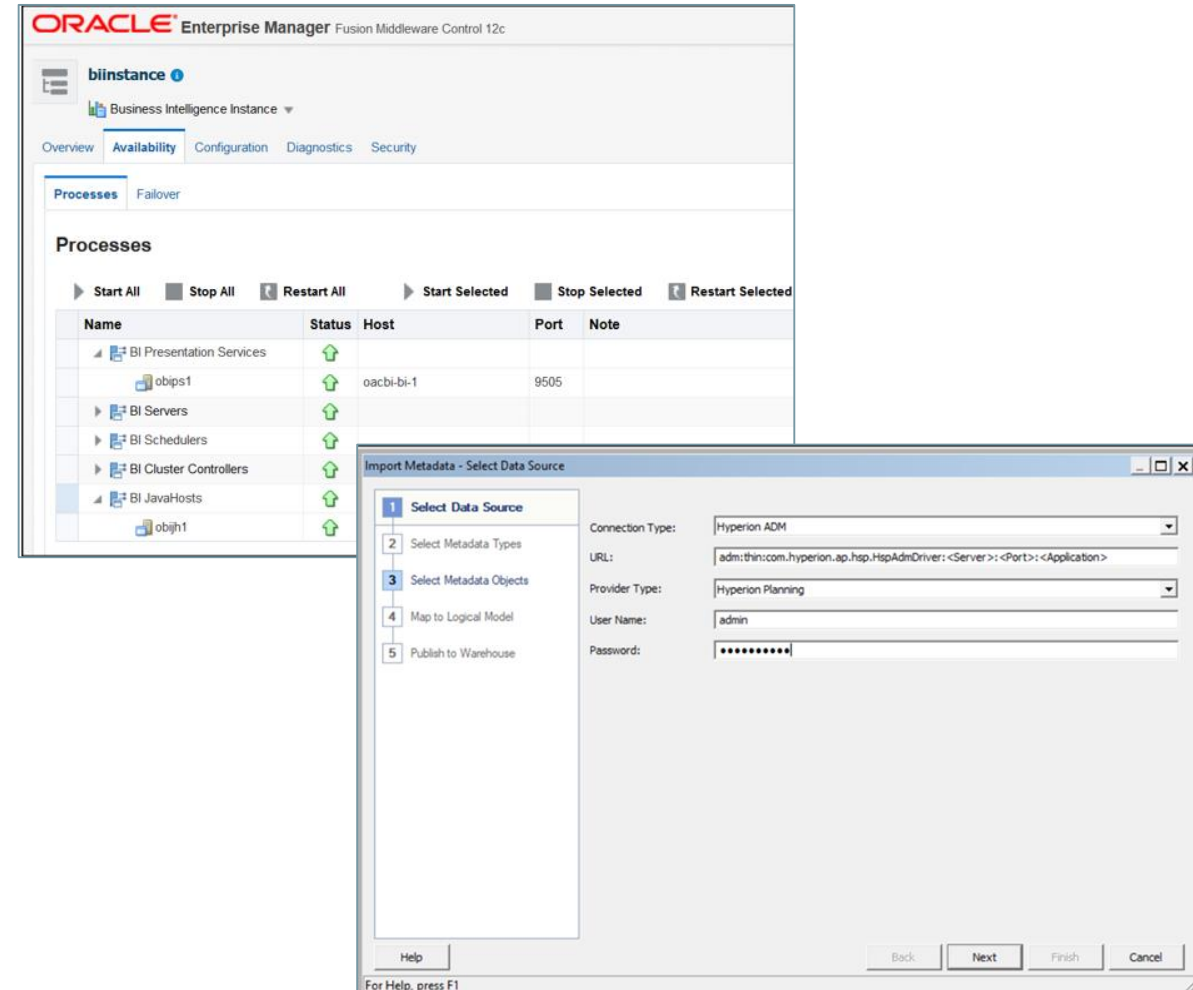
**Name Sleeping Beauty's Three Fairy God Mothers.**

# Demo - Essbase Cloud and Data Visualizations

# Key Takeaways and Recommendations

# Connecting OAC to EPM Cloud Data Sources

- OAC does allow for direct connection to EPBCS and FCCS applications
- Requires the use of the BI Admin Tool and configuring the connection via the application URL and ADM driver
- We have found this setup is best suited for more stagnant reporting applications
- We recommend setting up reporting cube to mirror EPM applications in OAC for visualizations for better performance



# Utilizing Essbase as a Source for Visualizations

---

- Cubes must have less than 50 accounts, so design them in a way that summarizes your data in a meaningful way
- There is a lag time between cube metadata updates refreshing to DV but data submission is real-time
- Ability to submit data to Essbase through Smart View and the new write back plug-in
- Limit dimensions in your cubes to avoid your visualization filtering becoming unbearable to manage
- Fast spin up of multiple cubes to make visualizing slices of your business easy

# Recent Enhancements

---

- Can now select an alias table when creating or updating Essbase data sets in DV
- Pause services you deploy on Oracle Cloud Infrastructure to prevent users from accessing the service
- Track user queries and generate reports and visualizations to analyze the usage data
- Create connections to the Snowflake Data Warehouse
- Share one or more of your project's visualizations, canvases, or stories to LinkedIn as a file
- Data file migration utility
- Snapshot enhancements
- Create connections to Oracle Autonomous Transaction Processing



**And One Random Star Wars Trivia Question!**

**What is Luke Skywalker's Home Planet?**

Questions?

# Let's Catch Up



**Nick Scott**

Principal

SC&H Group

✉ [nscott@schgroup.com](mailto:nscott@schgroup.com)

📞 410-988-1362



Stop By and See Us in the Exhibit Hall!

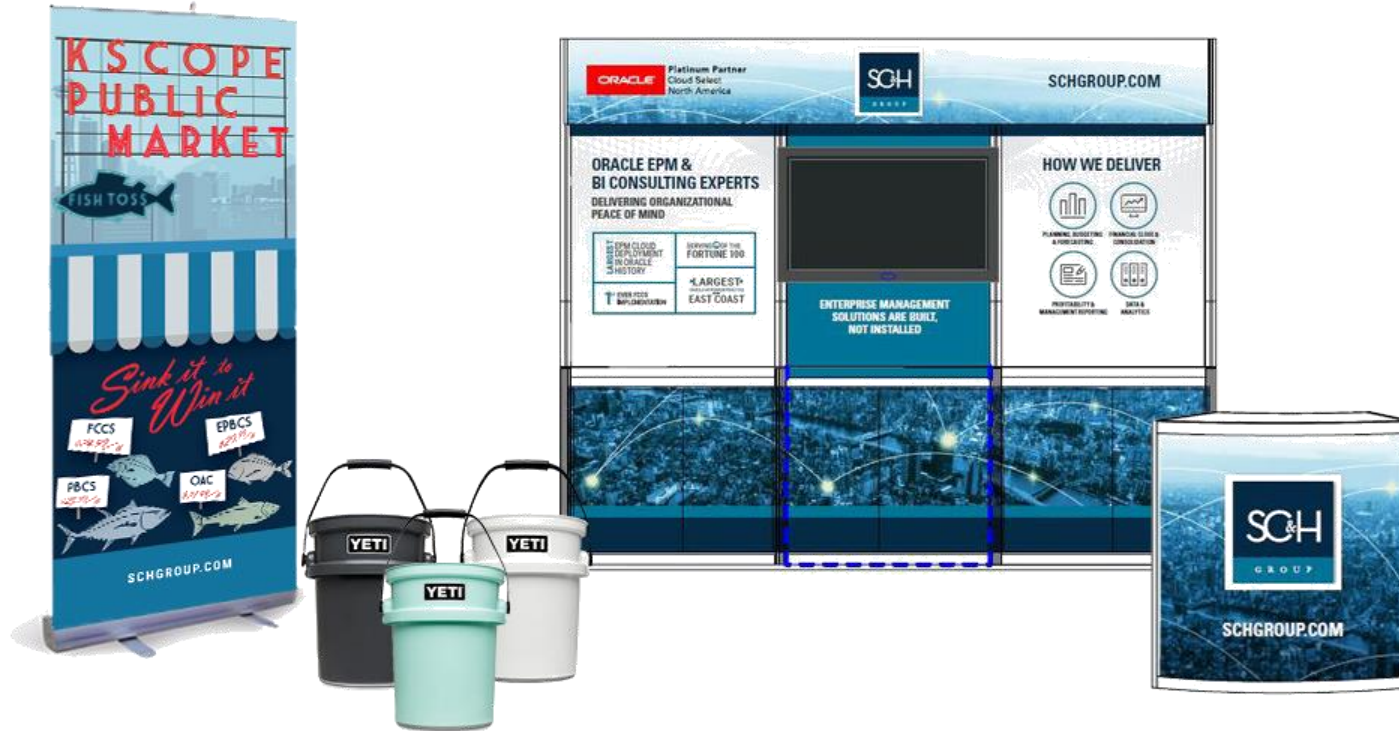
# SC&H @ Booth #110

## “Live” Fish Toss Contest

### Make 3 Shots:

- Win Starbucks Gift Card
- Entered for Chance to Win 1 of 3 Yeti Buckets

Boat Keychains!  
Swedish Fish!  
Koozies!





I'M SPEAKING AT

ODTUG  
Kscope19



SEATTLE, WASHINGTON • JUNE 23-27

[www.kscope19.odtug.com](http://www.kscope19.odtug.com)



SEATTLE

 Washington State  
Convention Center