

# Autonomous Data Warehousing in the Real World: A Case Study

Oracle OpenWorld 2018

Ray Owens, Jerry Gearding, Dan VlamiS

October 25, 2018

@dxmarketing, @VlamiSSoftware



# Presentation Agenda

- Background on DX Marketing – Vlami relationship
- Need for and goals for pilot project
- Background on ADW
- Demo of setting up ADW and loading test data
- Demo of results of ADW – DVD connection
- Next steps
- Recap of what we showed
- Q&A



# Presenter Background

## Dan Vlamiis – President

- Founded Vlamiis Software Solutions in 1992
- 30+ years in business intelligence, dimensional modeling
- Oracle ACE Director 
- BIWA Board Member since 2008
- @dvlamiis

## Ray Owens

- CEO and founder of DX Marketing
- Experienced in startups and specialist in marketing strategy
- Two Oracle Excellence awards for platform development

## Jerry Gearding

- CTO at DX Marketing
- 25+ Years IT experience
- 20+ Years experiencing working with Oracle technologies
- Member of the Oracle Big Data Leaders Advisory group

# VlamiS Software Solutions

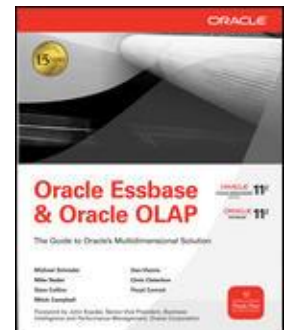
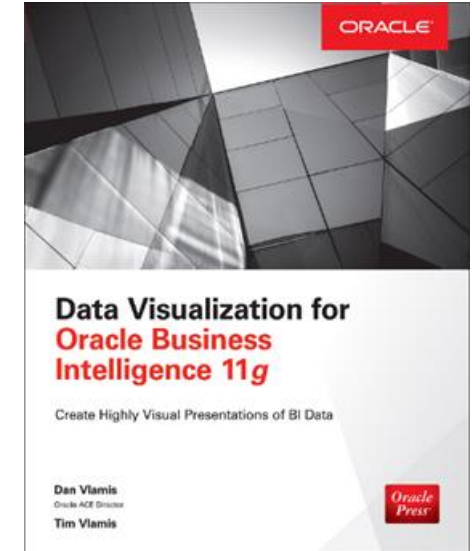
- VlamiS Software founded in 1992 in Kansas City, Missouri
- Developed 200+ Oracle BI and analytics systems
- Specializes in Oracle-based:
  - Enterprise Business Intelligence & Analytics
  - Analytic Warehousing
  - Data Mining and Predictive Analytics
  - Data Visualization
- Multiple Oracle ACEs, consultants average 15+ years
- [www.vlamiS.com](http://www.vlamiS.com) (blog, papers, newsletters, services)
- Co-authors of book “Data Visualization for OBI 11g”
- Co-author of book “Oracle Essbase & Oracle OLAP”
- Oracle University Partner
- Oracle Gold Partner

 EDUCATION RESELLER

 APPROVED  
EDUCATION CENTER

 Gold  
Partner

Specialized  
Oracle Business Intelligence  
Foundation Suite 11g



# What Do We Do?

DXM provides growing companies affordable access to enterprise level data and analytics so they can make marketing investments with greater confidence and compete more effectively.

## THE DXM PLATFORM - XactAudience®

Five ways data is used to inform marketing decisions



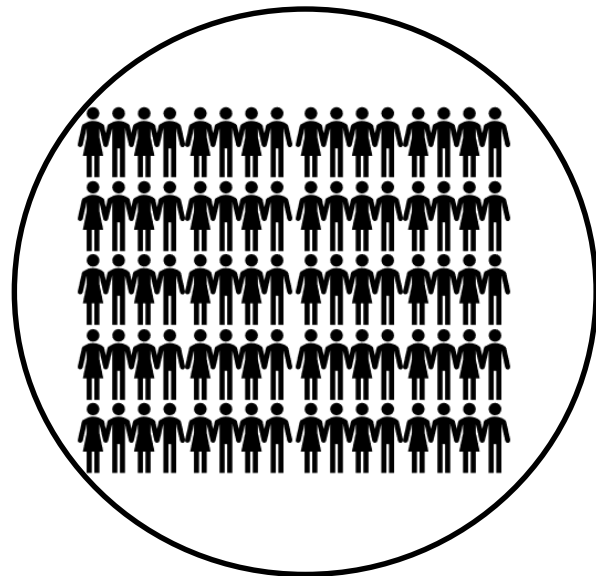
# What fuels DX Marketing's platform? Three Oracle Pillars.



Combining access to the some of the industry's biggest and best data

ORACLE<sup>®</sup> 12<sup>c</sup>  
DATABASE

EPSILON<sup>®</sup>



## Largest U.S. Consumer Dataset

Accessing over 260 million consumer records and building custom prospect audiences based on precise demographics and lifestyle attributes. Real people - not anonymous IDs.

ORACLE<sup>®</sup>  
DATA CLOUD

Connecting to "Sally Shopper"



Name +  
Postal



Email  
IDs



Cookie  
IDs



Mobile  
IDs

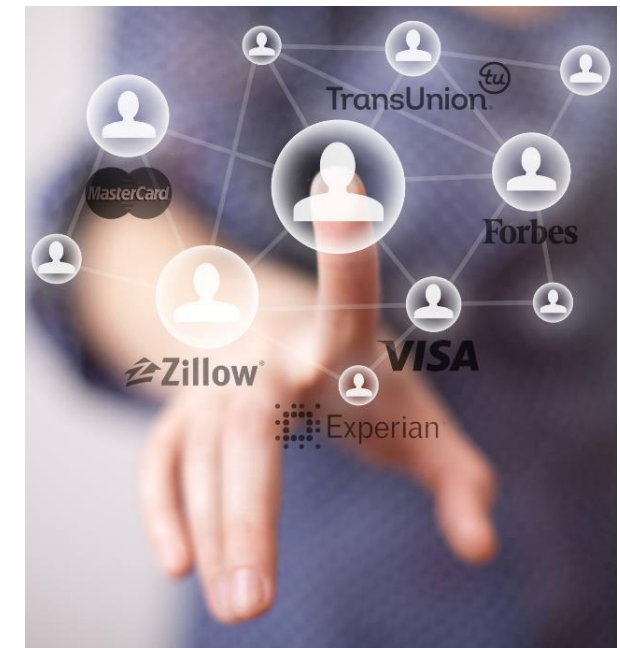
[SallySmith1981@gmail.com](mailto:SallySmith1981@gmail.com)  
[SallyS1981@yahoo.com](mailto:SallyS1981@yahoo.com)  
Twitter: @sally1983yeah  
Facebook: Susan X. Smith  
Snapchat: SS1983Yeah  
Pinterest: SSYeahFoodie  
Instagram: SSYeah1983Now  
IDFA 3245  
AdID 6687  
Home: 124 Main Street, Albany NY  
Work: 123 Corporate Park, Albany NY  
IE ID Device 1 67543  
Chrome ID Device1 87546  
Chrome ID Device2 98766  
I.P. Address: 148.87.13.11  
I.P. Address: 148.89.33.22

## Largest Digital ID Graph

Our ID graph is **built on REAL people's everyday actions and transactions** and reaches over 90% of the online population. Connects your prospect audience to their online identities.

ORACLE<sup>®</sup>  
DATA CLOUD

ORACLE<sup>®</sup>  
Marketing Cloud



## Largest DMP – digital exchange

Together with our data partners, we match audiences using the **best predictor of future purchases**: what people have bought in the past – and what they are currently in market to buy.



# Pilot Project

- Followed from DX Marketing – VlamiS project on simplifying loading and transforming data for DX Marketing
  - Moved data back and forth – multiple web services
  - Simplified using web calls using OIC with Oracle database as hub
  - DX Marketing wanted to simplify DBA role as well
  - Need to accelerate multiple client projects
  - Limited technical resources
- Goal of the pilot project
  - Test out Autonomous Data Warehouse
  - Test out ability of non-technical people to do analysis without DBA involvement



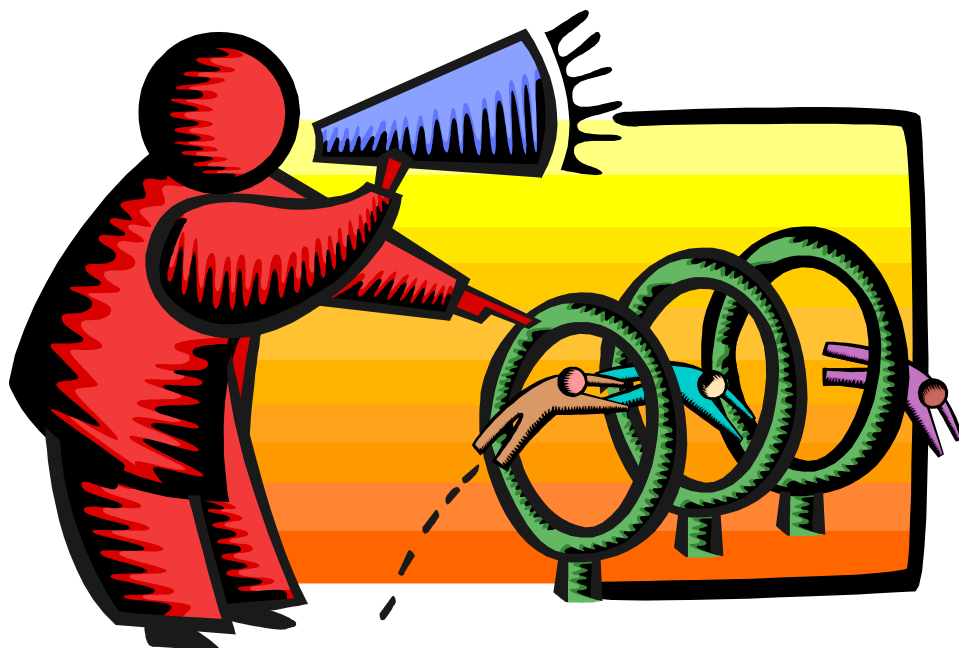
# Autonomous Data Warehouse Intro

- Easy
  - No DBA activities required
  - Only 4 things to know to set up
    - # of CPUs to start with
    - Size of database to provision (independent from # CPUs)
    - Password for admin account
    - Do you have an Oracle database license?
  - Automatically backed up
- Fast
  - Uses Exadata storage indexes – fast hardware
  - Don't need to create indexes
  - Can instantly change # CPUs from 1 to 128
- Elastic
  - Can suspend to save money, scale up / down easily
- Connect using all sorts of client tools
  - SQL Developer
  - Zeppelin Notebooks (built for machine learning scripts)
  - Data Visualization Desktop





# Demonstrations



- Creating and loading Autonomous DW
- Analysis possible using Data Visualization Desktop



# Pilot Overview

## Provisioning Steps

- 1) Create Oracle Cloud Account
- 2) Go to “My Services” Dashboard
- 3) Choose “Services” and Autonomous Data Warehouse
- 4) Click “Create Autonomous Data Warehouse”
- 5) Choose the Name, CPUs/Storage and the Admin password
- 6) Click Create ADW.

Provision time: 5 minutes



# Pilot Overview

Create Autonomous Data Warehouse [help](#) [cancel](#)

[Click here](#) to enable compartment selection for your Autonomous Data Warehouse.

DISPLAY NAME

DATABASE NAME

The name must contain only letters and numbers, starting with a letter. 14 characters max.

CPU CORE COUNT

The number of CPU cores to enable. Maximum cores per database: 128. Available cores are subject to your tenancy's service limits.

STORAGE (TB)

The available storage, up to 128 TB.

### Administrator Credentials

Set the password for your Autonomous Data Warehouse ADMIN user here.

USERNAME READ-ONLY

PASSWORD

CONFIRM PASSWORD

LICENSE TYPE

☐ MY ORGANIZATION ALREADY OWNS ORACLE DATABASE SOFTWARE LICENSES  
Bring my existing database software licenses to the database cloud service ([details](#)).

☒ SUBSCRIBE TO NEW DATABASE SOFTWARE LICENSES AND THE DATABASE CLOUD SERVICE


- Instance Name
- DB Name
- # CPUs and Storage
- Admin Password
- Licensing



# Pilot Overview

## Scaling Up or Down

dxadwc1

 [Service Console](#) **Scale Up/Down** [Admin Password](#) [Restore](#) [Stop](#) [Apply Tag\(s\)](#) [Terminate](#)

**Autonomous Data Warehouse Information** [Tags](#)

<b>Display Name:</b> dxadwc1	<b>Created:</b> Wed, 12 Sep 2018 20:04:50 GMT
<b>Database Name:</b> dxadwcdb	<b>CPU Core Count:</b> 2
<b>Compartment:</b> adwtest	<b>Storage (TB):</b> 1
<b>OCID:</b> ...6fyvzq <a href="#">Show</a> <a href="#">Copy</a>	<b>Lifecycle State:</b> Available
<b>License Type:</b> License Included	

ORACLE Cloud Infrastructure

Autonomous Data Warehouses » Autonomous Data Warehouse

**dxadwc1**

**ADW**

AVAILABLE

**Scale Up/Down** [cancel](#)

**CPU CORE COUNT**

2

The number of CPU cores to enable. Maximum cores per database: 128. Available cores are subject to your tenancy's service limits.

**STORAGE (TB)**

1

The available storage, up to 128 TB.

**Update**

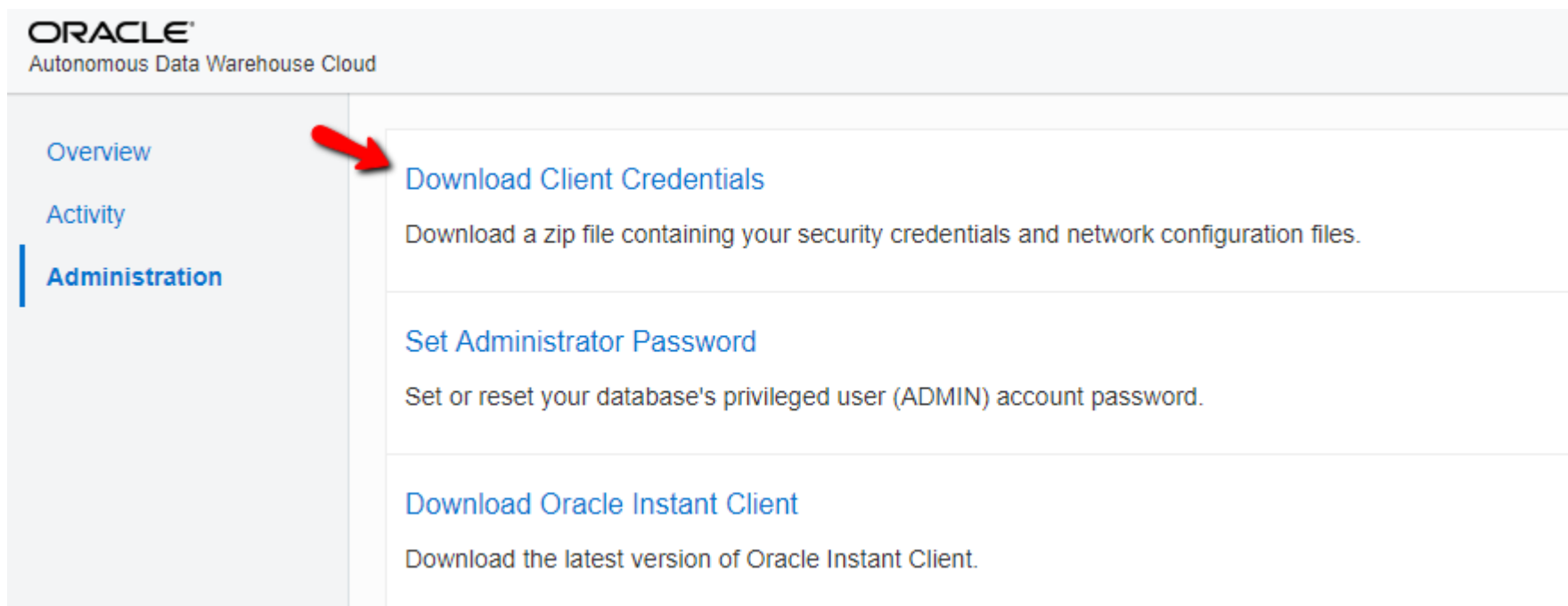
<b>Display Name:</b> dxadwc1	<b>Created:</b> Wed, 12 Sep 2018 20:04:50 GMT
<b>Database Name:</b> dxadwcdb	<b>CPU Core Count:</b> 2
<b>Compartment:</b> adwtest	<b>Storage (TB):</b> 1
<b>OCID:</b> ...6fyvzq <a href="#">Show</a> <a href="#">Copy</a>	<b>Lifecycle State:</b> Available
<b>License Type:</b> License Included	



# Pilot Overview

## Download Wallet File

- Click Service Console
- Choose Administration Tab
- Click Download Client Credentials





# Pilot Overview

## Connect SQL/Developer

New / Select Database Connection

Connecti...	Connecti...
ADW-Admin	admin@d...
ADW-Ad...	admin@d...
ADW-Ad...	admin@d...
ADW-Ad...	admin@d...
BMCS-dm...	dmuser...
BMCS-dx...	c##dxm...
BMCS-dx...	sys as sy...
BMCS-dx...	c##dxm...
DXOACD...	sys@//1...
xe_jerry	jerry@//l...

Connection Name: ADW-Admin\_Low

Username: admin

Password: .....

☐ Save Password ☒ Connection Color

**Oracle**

Connection Type: Cloud PDB Role: default

Configuration File: C:\Users\jgearding\Downloads\wallet\_DXADWCDB.zip Browse...

Service: dxadwcdb\_low

Configure QSS

☐ OS Authentication ☐ Kerberos Authentication Advanced...

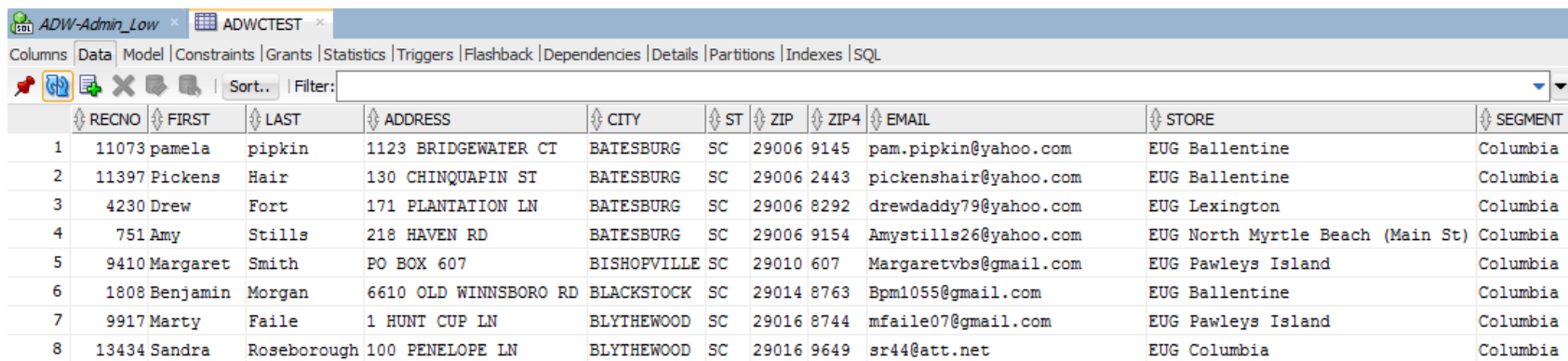
Status :

Help Save Clear Test Connect Cancel



Can also use:

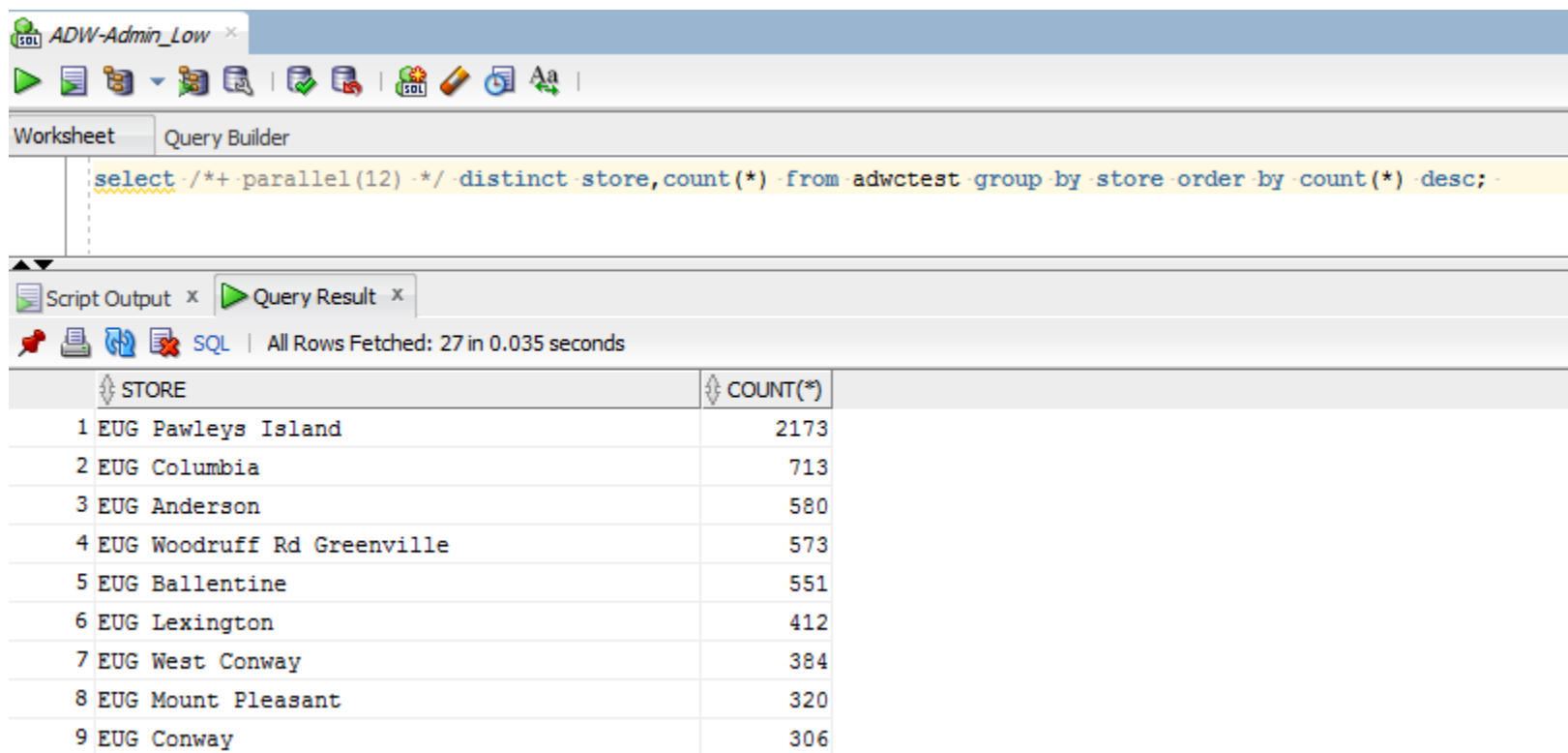
- SQL Loader
- Data Pump
- External tables





# Pilot Overview

## Query Table



The screenshot shows the SQL Developer interface with a query window titled 'ADW-Admin\_Low'. The query is: `select /*+ parallel(12) */ distinct store, count(*) from adwctest group by store order by count(*) desc;`. The 'Query Result' tab is active, displaying a table with 27 rows. The first 9 rows are shown, sorted by count in descending order.

	STORE	COUNT(*)
1	EUG Pawleys Island	2173
2	EUG Columbia	713
3	EUG Anderson	580
4	EUG Woodruff Rd Greenville	573
5	EUG Ballentine	551
6	EUG Lexington	412
7	EUG West Conway	384
8	EUG Mount Pleasant	320
9	EUG Conway	306





# Business Value & Next Steps

- Next steps
  - DX Marketing wants to use as a sandbox for its analysts
  - DX Marketing considering moving all of its marketing content to ADW
  - Allowing non-technical people to analyze without DBA intervention
- Business Value of Pilot
  - Plan on speeding execution of new client projects – creating new DWs
    - From 3 weeks to 1 week
  - Eliminates need to expand technical staff
    - Save on money
    - Monetize with additional account service staff
  - Fast access to data
    - Analysts can create presentations of data in a matter of minutes/hours
    - Refreshing data is now easy



# Recap

- Recap of what we showed
  - Easy to set up
  - Fast to deliver
  - Great performance
  - No technical DBA skills required to analyze and extend
  - Analyze data within minutes



# Analytics and Data Summit

All Analytics. All Data. No Nonsense.

March 12 – 14, 2019



Formerly called the BIWA Summit with the Spatial and Graph Summit  
Same great technical content...new name!

[www.AnalyticsandDataSummit.org](http://www.AnalyticsandDataSummit.org)



## &lt; EUG Initial Analysis - Project

Prepare Visualize Narrate

Save

## Data Elements

ADWCTEST

RECNO

ADDRESS

CITY

EMAIL

FIRST

LAST

SEGMENT

ST

STORE

ZIP

ZIP4

My Calculations

Value Labels

CITY, FIRST, LAST, ZIP,...

General

Title

Auto

Type

Table

Legend

Auto

Click here or drag data to add a filter

Table

Rows

CITY

FIRST

LAST

ZIP

STORE

countpeople

Color

Size

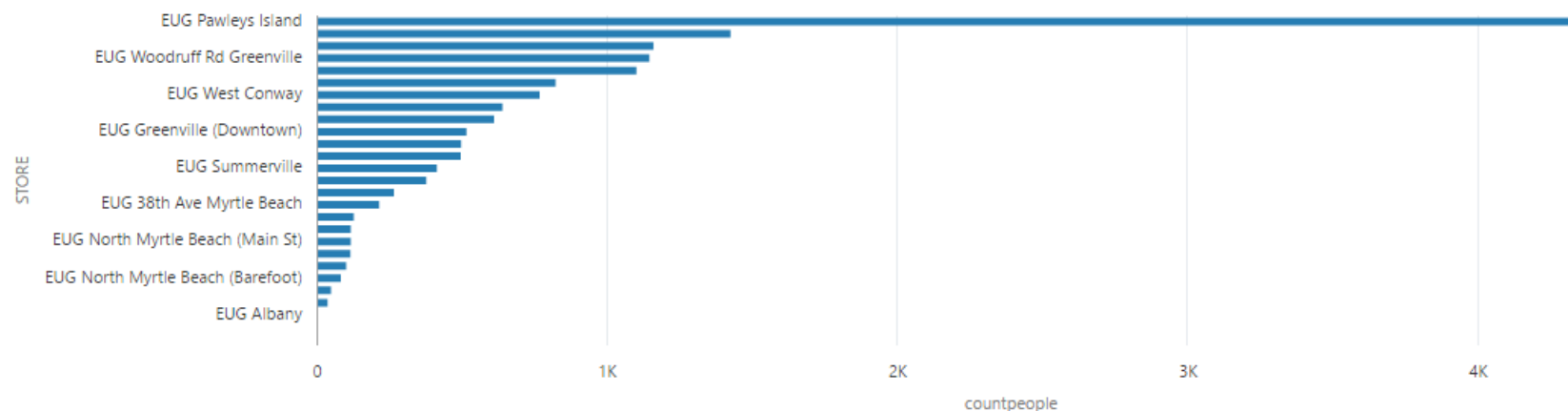
Shape

Filters

CITY, FIRST, LAST, ZIP, STORE, countpeople

CITY	FIRST	LAST	ZIP	STORE	countpeople
ABBEVILLE	Dawn	Sutton	29620	EUG Anderson	2
	Jessica	McIlwain	29620	EUG Pawleys Island	2
	Lois	Taylor	29620	EUG Anderson	2
	Marlys	Morgan	29620	EUG Pawleys Island	2
	Mary	Hill	29620	EUG Pawleys Island	2
	Patricia	Argo	29620	EUG Anderson	2
	angela	adams	29620	EUG Anderson	2
	Janet	Jenkins	29803	EUG Anderson	2
	Joanne	Brady	29805	EUG Ballentine	2
	Marlana	Coleman	29805	EUG Lexington	2

countpeople by STORE



## &lt; EUG Analysis - Project

Prepare Visualize Narrate

Save

## Data Elements

EUG\_LOYALTY

- RECNO
- ADDRESS
- ADV\_DWEL...
- ADV\_HOME...
- ADV\_HSHLD...
- ADV\_INDIV...**
- ADV\_INDV...
- ADV LENGT...
- ADV\_TARGE...
- CHLDRN\_A...
- CHLDRN\_A...
- CHLDRN\_A...

## ADV\_INDIVIDUAL\_AGE...

General

Title

Auto

Type

Scatter (Cat.)

Legend

None

GENDER (2)

F, M

TARGET\_VALSCORE2\_ALL\_MKTRS (12)

A1, A2, B1, B2, C1, C2, D1, D2, D3, E1, E2, ...

Scatter (Cat.)

Trellis Columns

Trellis Rows

Values (Y-Axis)

ADV\_INDIVID...

Category (X-Axis)

TARGET\_VAL...

Color

Size (Width)

countperson

Shape (Shape)

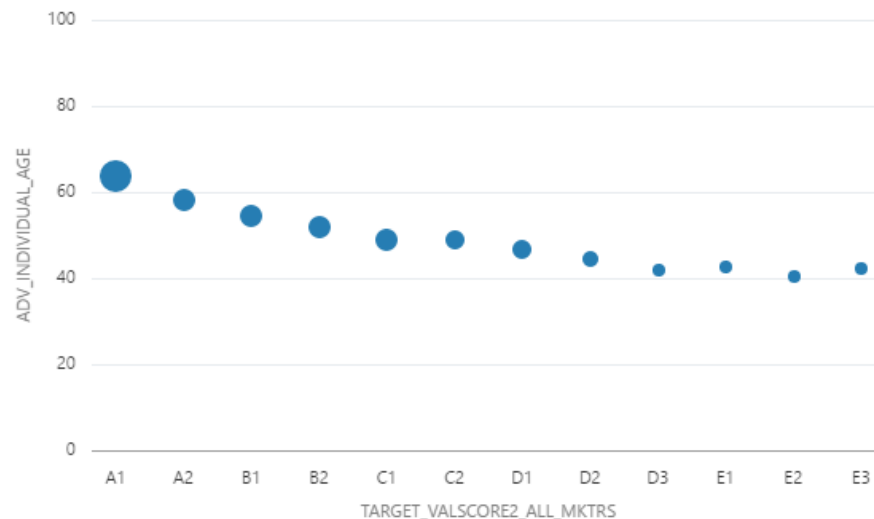
Tooltip

Detail

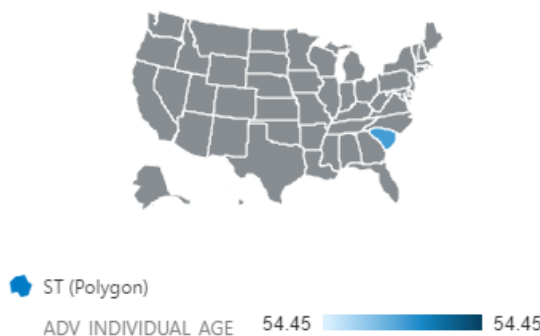
Filters

Canvas 1

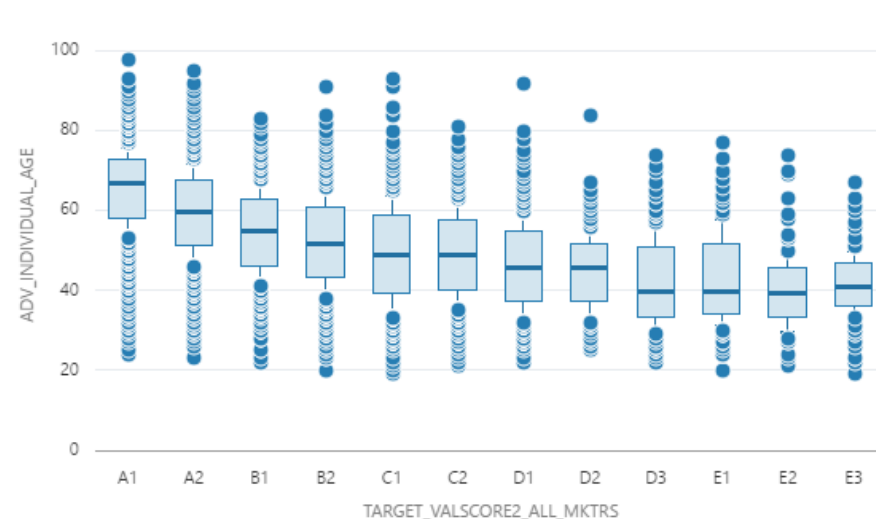
ADV\_INDIVIDUAL\_AGE by TARGET\_VALSCORE2\_ALL\_MKTRS, countperson



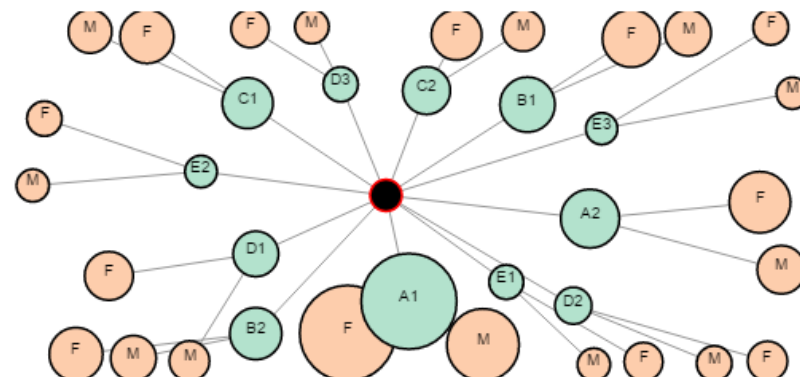
ST, ADV\_INDIVIDUAL\_AGE



ADV\_INDIVIDUAL\_AGE by TARGET\_VALSCORE2\_ALL\_MKTRS, EMAIL



countperson by TARGET\_VALSCORE2\_ALL\_MKTRS, GENDER, SEGMENT



## &lt; Jerry2 - Project

Prepare

Visualize

Narrate

Save

## Data Elements

IMPRESSIONS\_...

ADDRESS

CUSTOMER

LAT

LNG

ST

LOCATOR

MARKET

ADDRESS

CITY

LAT

LNG

ST

RESPONDERS...

## Text Box



Style

Background Color



Border Color



Remove Selection

NOT(("LAT" = '29.7016') AND ("LAT" = '29.70...

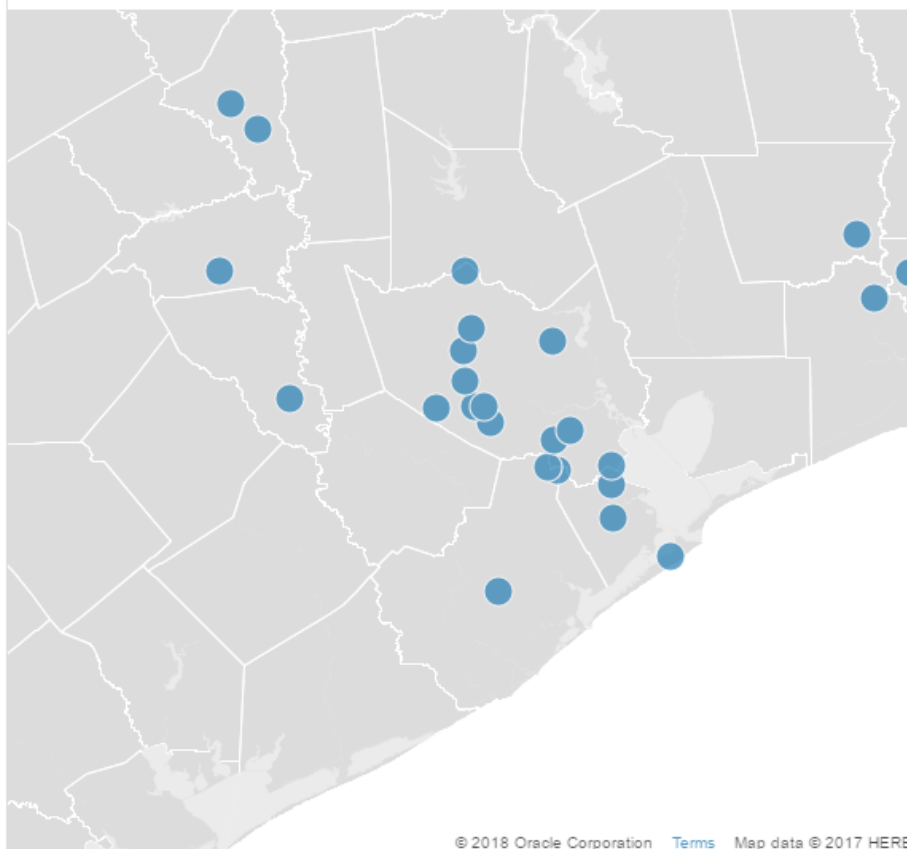


The project was successfully saved.



## Store Locations

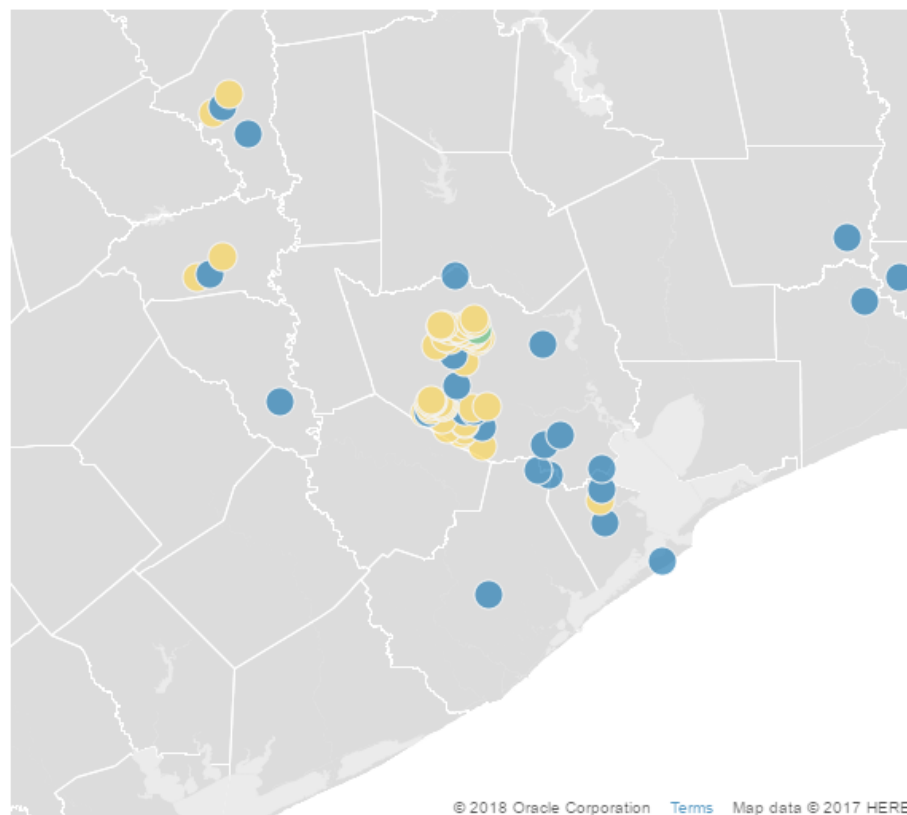
LAT, LNG



Layer 1 Layer 2

## Responders

LAT, LNG, CUSTOMER



Layer 2 Layer 3

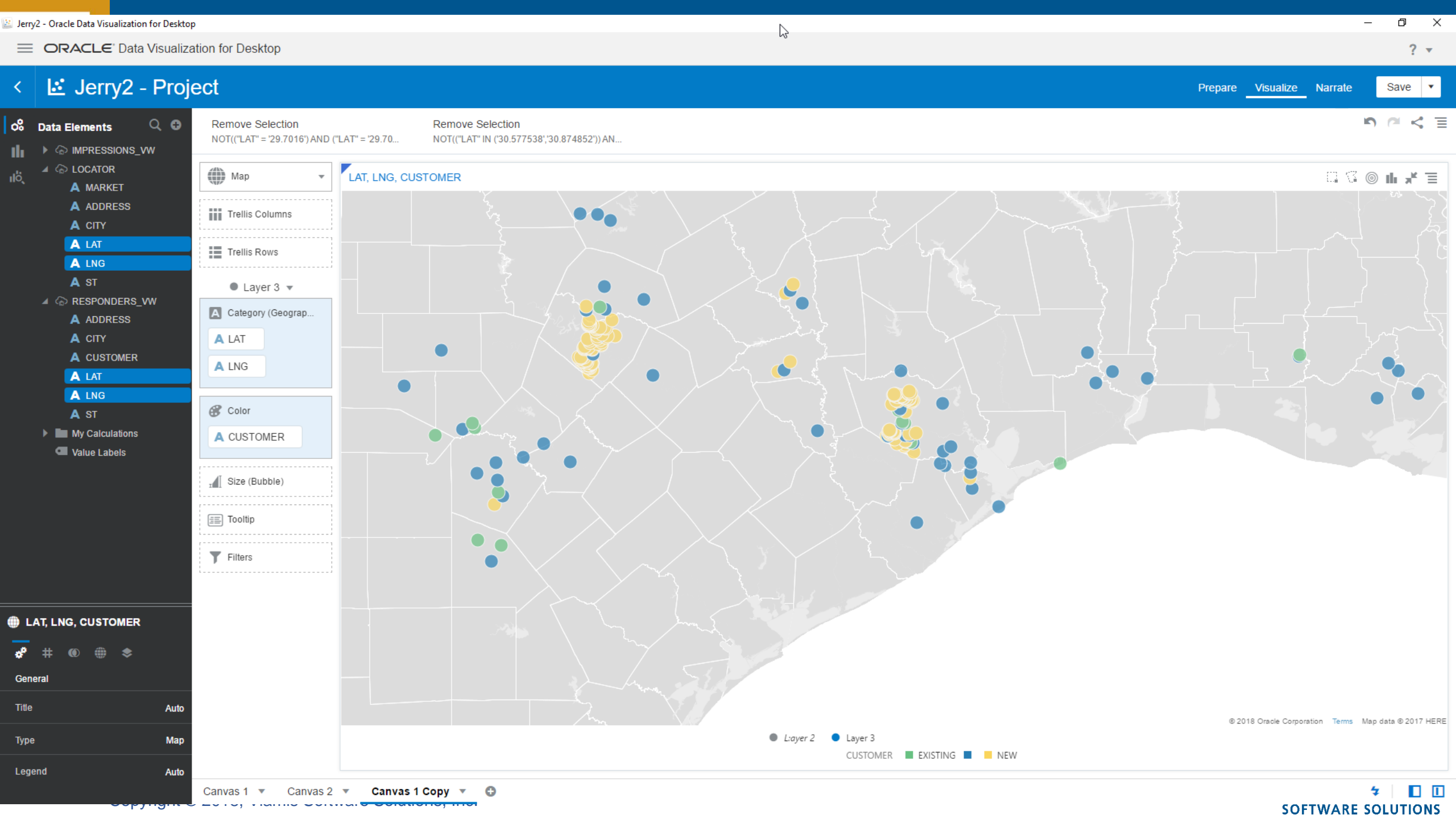
CUSTOMER EXISTING NEW

Canvas 1

Canvas 2

Canvas 1 Copy





Get 3300 hours, 2 TB of Exadata Storage  
on Oracle Cloud for free\*

A laptop screen displaying promotional text for Oracle Cloud. The screen has a white background with a dark blue decorative header at the top. The text is centered and includes a link for Autonomous-DW and a link for Autonomous-TP.

**No Manual Tuning or Administration Needed**

**<https://go.oracle.com/Autonomous-DW>**

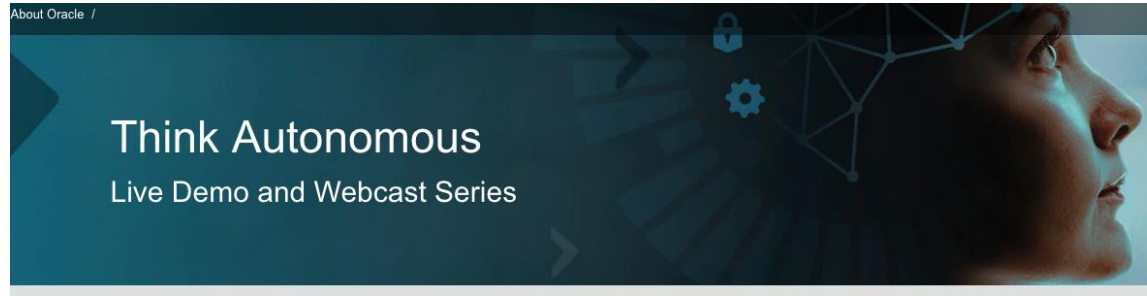
**<https://go.oracle.com/Autonomous-TP>**

\* Trial expires upon usage of 3300 CPU hours or trial has reached 30 days, whichever comes first.



# Previously recorded as part of Think Autonomous series

## [Oracle.com/ThinkADB](https://www.oracle.com/ThinkADB)



Join Oracle for a webcast series that explores the various benefits of Oracle Autonomous Database Cloud. We will present a live walk through of the Autonomous Data Warehouse Cloud service and Autonomous Transaction Processing Cloud and will highlight use cases that can help you unleash the power of your data. Register today!

- [On-demand](#)  
Step-by-Step Guide to Oracle Autonomous Data Warehouse Cloud
- [On-demand](#)  
Empowering business with more sophisticated, faster analytics with Oracle Cloud Platform
- [On-demand](#)  
Accenture Unveils Real-Life Performance Results for Oracle Autonomous Data Warehouse
- [On-demand](#)  
Oracle Unveils Autonomous Transaction Processing: the road to hands-free database operations
- [On-demand](#)  
9 a.m. PT / 12 p.m. ET  
Step-by-Step Guide to Oracle Autonomous Transaction Processing
- [On-demand](#)  
9 a.m. PT / 12 p.m. ET  
Experience fast and easy migration to Oracle's Autonomous Data Warehouse
- September 26, 2018  
9 a.m. PT / 12 p.m. ET  
Oracle Autonomous Cloud: Enabling a Path to Microservices Architecture  
[Register here](#)
- October 3, 2018  
9 a.m. PT / 12 p.m. ET  
Vlami Software Solutions Shows Enterprise-Changing Results with Oracle Autonomous Data Warehouse  
[Register here](#)
- October 10, 2018  
9 a.m. PT / 12 p.m. ET  
Does Cloud Mean the End of the DBA?: DBA 18.0—Life After 18c  
[Register here](#)
- October 17, 2018  
9 a.m. PT / 12 p.m. ET  
Take your analytics to the next level of insights with Oracle Autonomous Data Warehouse  
[Register here](#)



# Questions?

