



# Executing a Hybrid Strategy

## Integrating On-Prem with Cloud Applications

MAY 15 & 16, 2019

CLEVELAND PUBLIC AUDITORIUM, CLEVELAND, OHIO

[WWW.NEOOUG.ORG/GLOC](http://WWW.NEOOUG.ORG/GLOC)



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@TedChappell



/in/tedchappell/



Oracle Analytics, BI and Big Data  
Special Interest Group



# Agenda

1

Introduction

2

Review the need to integrate on-premises EBS with Cloud applications

3

Review how Mutual Materials transitioned to Cloud with a hybrid approach

4

Discuss results for end-users and future plans for DataVaya



# Mutual Materials

20+ Year Customer

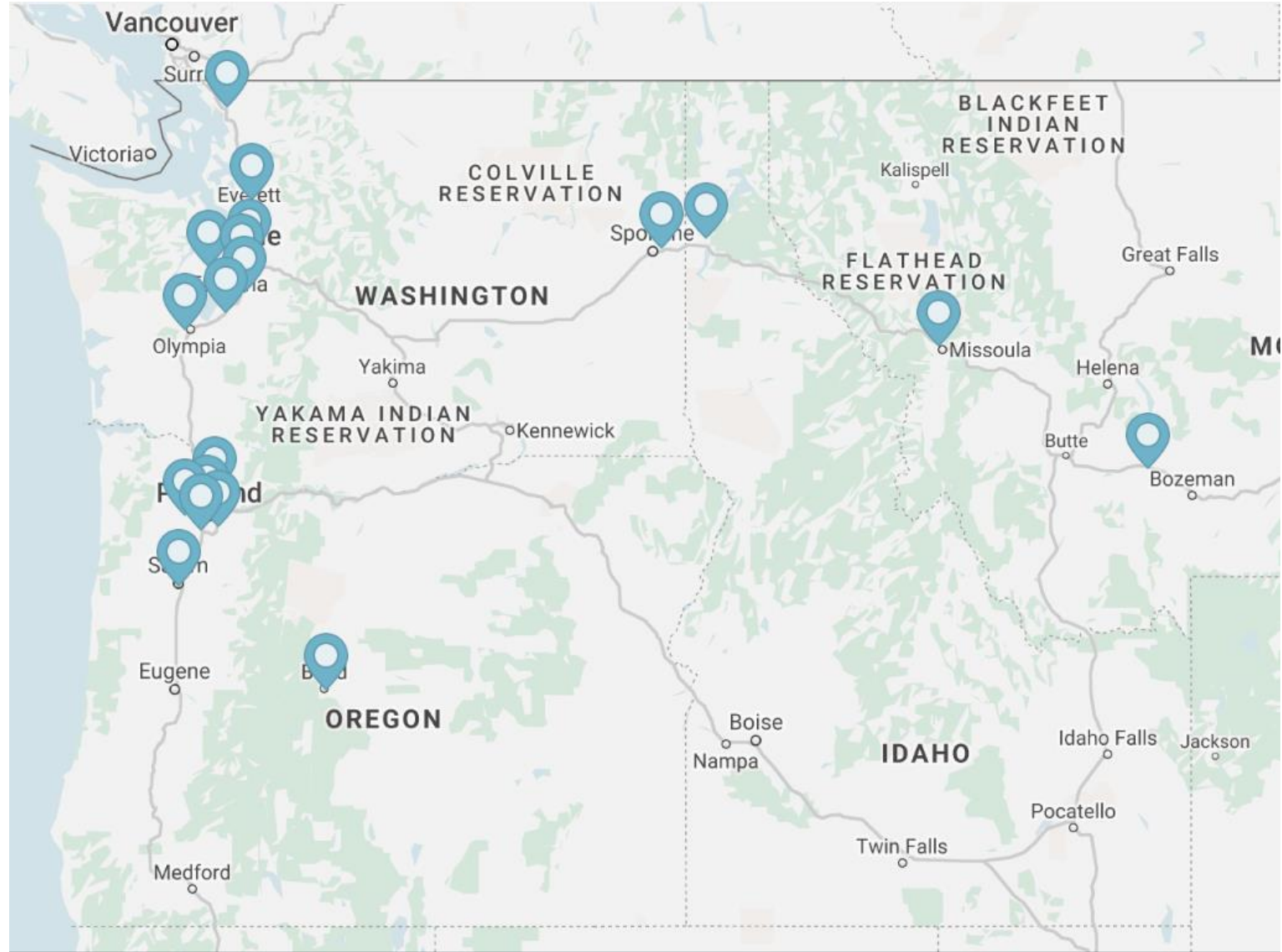
Started with Fax and Email of Purchase Orders  
from MANMAN on MPE

- The leading manufacturer and distributor of masonry and hardscape products in the Pacific Northwest
- Headquarters are located in Bellevue, Washington with operating facilities in Oregon, Washington, Montana, Idaho and British Colombia.
- Product lines are specialized in brick, pavers, retaining wall products, cultured stone, slabs, concrete masonry units, and more

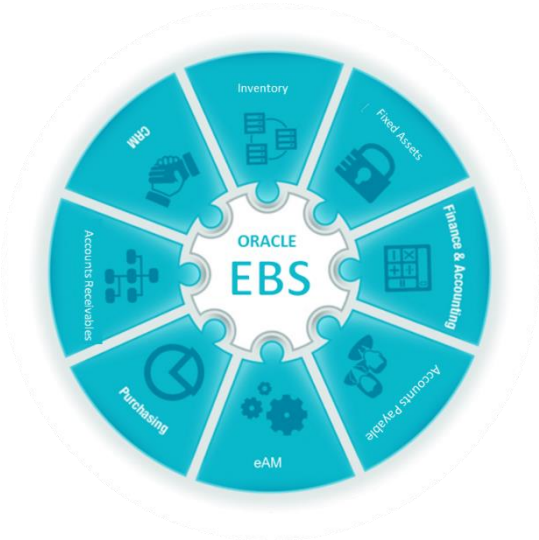


# Mutual Materials

Branch Locations



# Mutual Materials & Oracle



|                  |  |            |
|------------------|--|------------|
| EBS Version      | 12.2.5   | On-premise |
| Database Version | 12.1.0.2   | On-premise |
| EBS Modules      | Inventory, Purchasing, Financials, Quoting, Order processing, EDI, BOM, Manufacturing, Costing, Projects |            |
| OTM Version      | 6.4.2  | Cloud      |
| CRM              | Oracle Sales Cloud   | Cloud      |
| Marketing        | Oracle Marketing Cloud<br>Eloqua   | In-process |



# Mutual Materials & STR Software

— A 20+ Year Partnership —

**1998** (Q4)

Fax/Email of POs from  
MANMAN on MPE

**2009** (Q3)

AventX Oracle Connector with  
FAXCOM Anywhere

**2011** (Q2)

Live with DataVaya for Automated  
Transfer from Point-of-Sale System

**2001** (Q1)

Fax/Email of POs for  
EBS on UNIX

**2010** (Q2)

COLLABORATE— Joint  
Presentation introducing  
**DataVaya**

**2017** (Q2)

Adopted DataVaya to load  
inbound EDI data from  
Remote Stores

**2019**







# Sales at Mutual Materials

Sales Reps are on the road, a lot



# Sales at Mutual Materials

## Two Key Data Points

1. Customer Summary
2. Product Summary



# Sales at Mutual Materials

## How was data accessed?

1. Separate CRM system
2. Prepared reports beforehand





# Sales at Mutual Materials

## Why the process was flawed

1. Time consuming
2. No mobile capability
3. Difficult access to data
4. No connection back to EBS





A dark, moody sky with a crescent moon in the upper left. Two dragons are flying over a sea of clouds. One dragon is on the left, and the other is in the center, slightly higher. The clouds are dense and textured, filling the lower half of the image. The overall color palette is dark blue and black.

# Operating in the Cloud

Claiming the Iron Throne of CRMs



# Enter Oracle Sales Cloud

Out with the old. In with the new.



Mobile capabilities

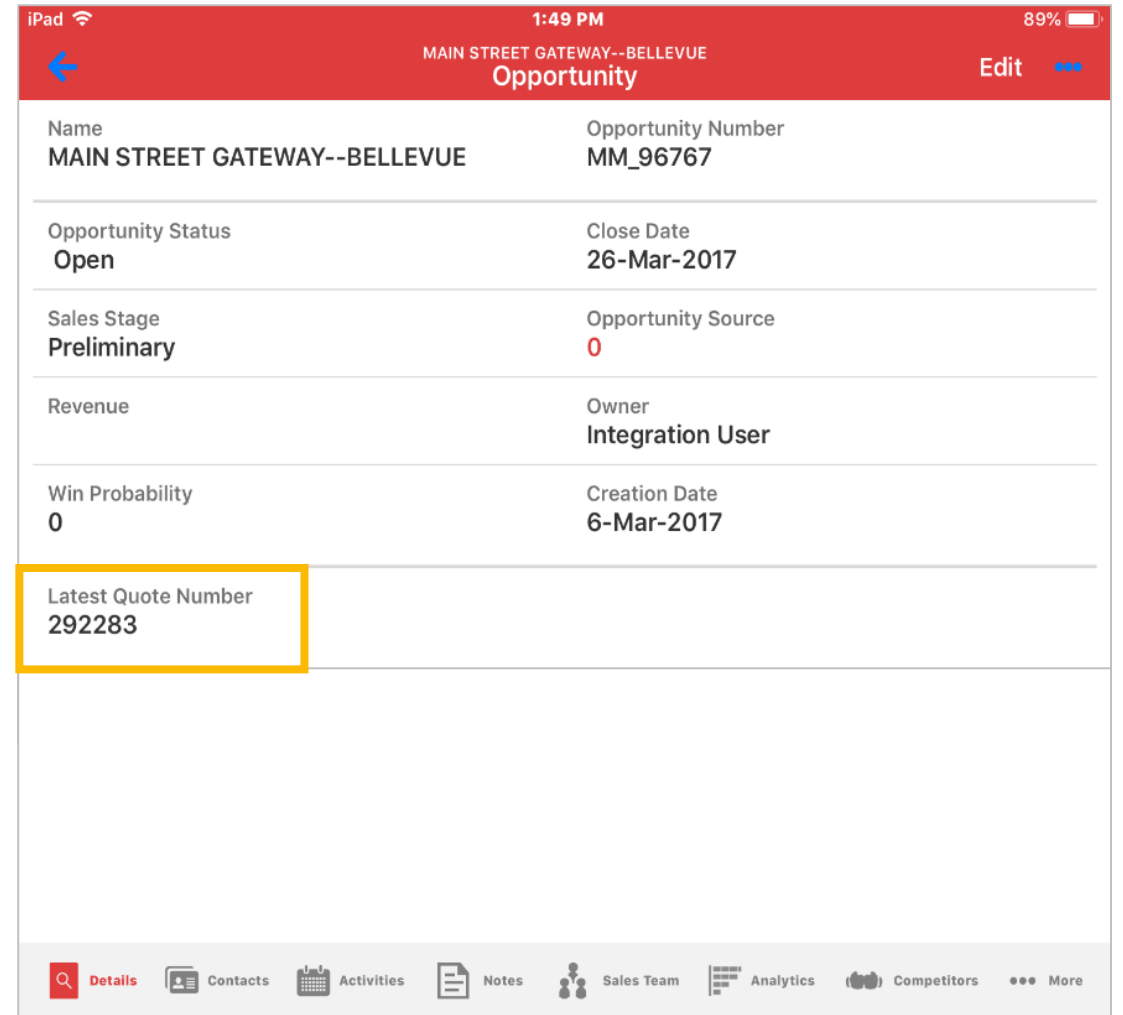
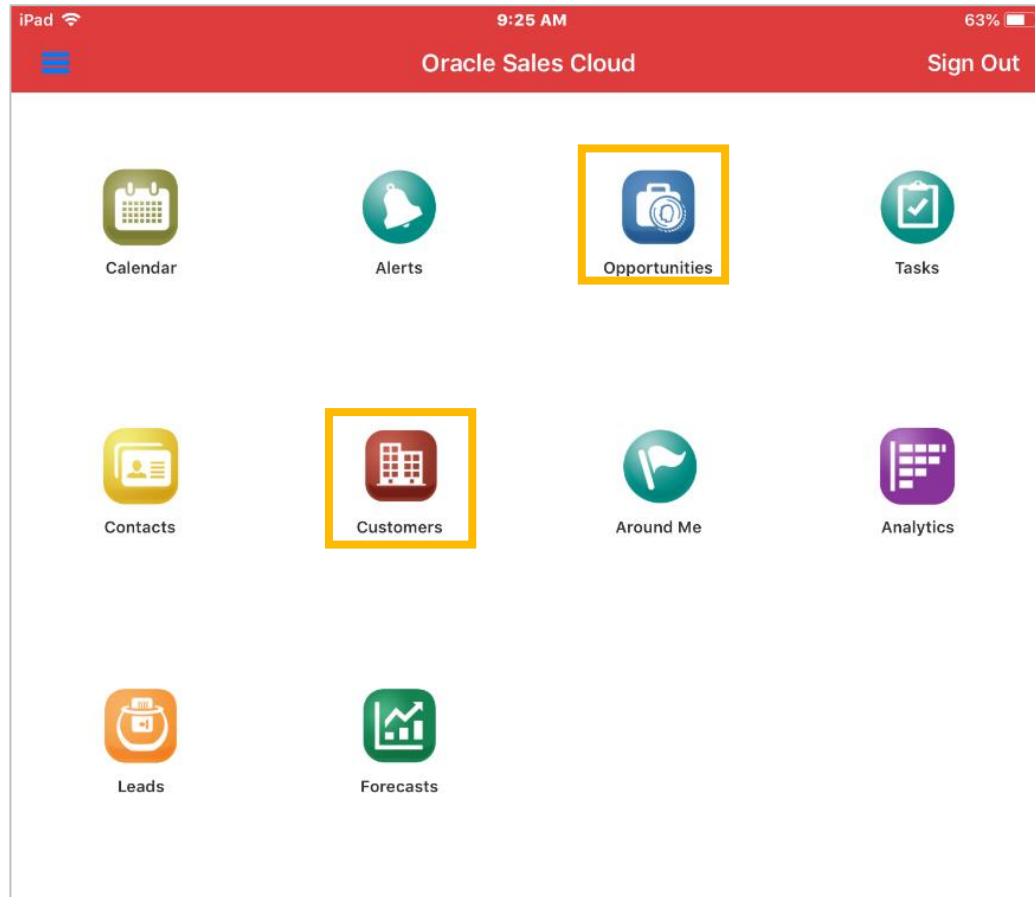


Modern system and simple interface



Integration with Oracle EBS Instance

# Oracle Sales Cloud Mobile





# Oracle Sales Cloud End Result

iPad 7:37 PM 90%  
CORNERSTONE MASONRY INC  
Account Edit

Customer  
CORNERSTONE MASONRY INC

Record Type  
Account

Type  
Customer

Account Class  
Contractor

Location  
2856 NE 65TH AVE STE A,VANCOUVER, WA 98661

Owner  
Bert Dehaan

Details Opportunities Contacts Assets Activities Leads Notes More

iPad 7:38 PM 89%  
Edit More

Analytics

Sales Team

Attachments

MUTL\_CUST\_ITEM\_SUMMARY

MUTL\_CUST\_SALES\_SUMMARY

Social

Details Opportunities Contacts Assets Activities Leads Notes More

iPad 7:38 PM 89%  
MUTL\_CUST\_SALES\_SUMMARY

|                                    |                                    |
|------------------------------------|------------------------------------|
| 27-Feb-2018<br>83693<br>34<br>USD  | 28-Feb-2017<br>74319<br>46<br>USD  |
| 30-Apr-2017<br>69612<br>72<br>USD  | 30-Jun-2017<br>98506<br>71<br>USD  |
| 30-Nov-2017<br>23675<br>28<br>USD  | 30-Sep-2017<br>149580<br>63<br>USD |
| 31-Aug-2017<br>105376<br>92<br>USD | 31-Dec-2017<br>38396<br>27<br>USD  |
| 31-Jan-2018<br>57107<br>42<br>USD  | 31-Jul-2017<br>91290<br>64<br>USD  |
| 31-Mar-2017<br>64103<br>64<br>USD  | 31-May-2017<br>115789<br>88<br>USD |
| 31-Oct-2017<br>46108<br>33<br>USD  |                                    |

Details Opportunities Contacts Assets Activities Leads Notes More

A large, dark dragon with a rider on its back is shown in flight over a vast, snowy mountain range. The dragon's wings are spread wide, and its head is lowered, showing its mouth with sharp teeth. The rider is a small figure, likely a person, sitting on the dragon's back. The background is a hazy, blue-tinted sky and snow-covered peaks.

# How did they get there?

On the backs of dragons, of course!



# Phase 1

## Challenge: Data EXPORT

Data from concurrent programs needed to be created and modified to properly export data.



# Phase 2

## Challenge: Data IMPORT

Custom tables and relationships to those tables needed to be created in Oracle Sales Cloud.





# Phase 2

So about “Customizing” Oracle Cloud...

Page Composer

Application Composer

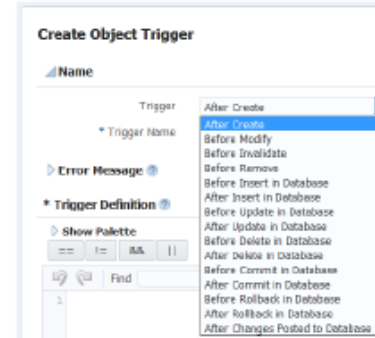
Groovy Scripting

Oracle JavaScript Extension Toolkit (JET)

Oracle Application Developer Framework (ADF)

## Oracle Sales Cloud – Developing with Application Composer

### When Triggers Are Fired

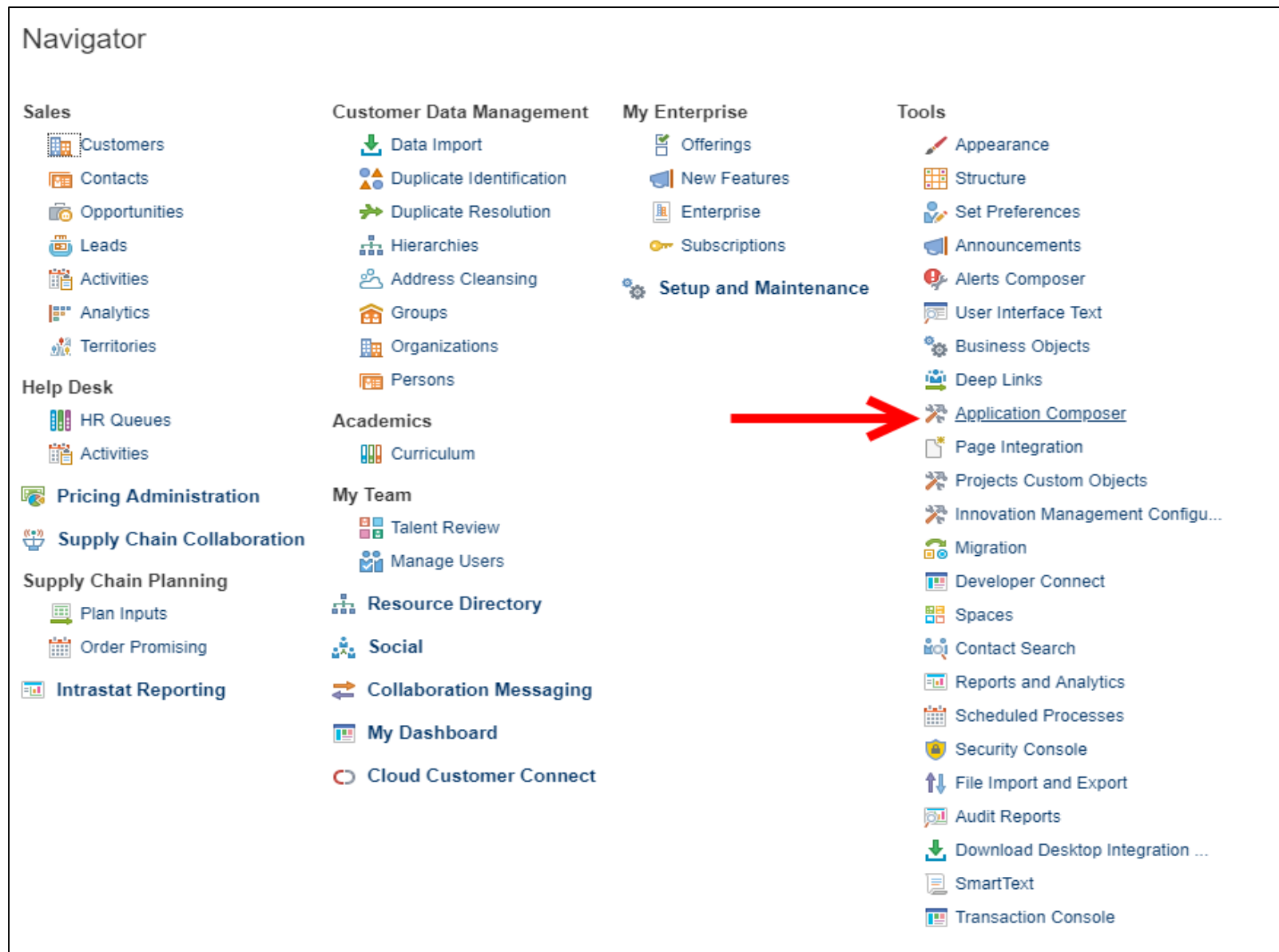


|                                  | On Create<br>(New) | On Update<br>(Change) | On Submit<br>(Save) | On Cancel | Notes   |
|----------------------------------|--------------------|-----------------------|---------------------|-----------|---|
| After Create                     | ✓                  |                       |                     |           |   |
| After Field Changed              |                    | ✓                     |                     |           |   |
| Before Invalidate                |                    | ✓                     |                     |           |   |
| Before Modify                    |                    | ✓                     |                     |           |   |
| Before Insert in<br>Database     |                    |                       | ✓                   |           | #1 in commit lifecycle                              |
| After Insert in<br>Database      |                    |                       | ✓                   |           | #2 in commit lifecycle                              |
| After Changes<br>Posted Database |                    |                       | ✓                   |           | #3 in commit lifecycle.<br>Last cancellation point. |
| After Commit in<br>Database      |                    |                       | ✓                   |           | #4 in commit lifecycle                              |
| Before Rollback in<br>Database   |                    |                       |                     | ✓         | #1 in rollback lifecycle                            |
| After Rollback in<br>Database    |                    |                       |                     | ✓         | #2 in rollback lifecycle                            |

# Phase 2

## Challenge: Data IMPORT

Custom tables and relationships to those tables needed to be created in Oracle Sales Cloud.





# Phase 2

## Challenge: Data IMPORT

Custom tables and relationships to those tables needed to be created in Oracle Sales Cloud.

**Edit Customer: FAIRWEATHER MASONRY C...: Profile** Actions ▾ Save Save and Close Cancel

**\* Customer Name** FAIRWEATHER MASONRY

**Annotation**

**Type** Customer ▾

**Account Class** Contractor ▾

**Phone** 1 ▾

**URL**

**Owner** Stan Carper ▾

**Attachments** None +

**Primary** ☒

**Address**

**Country** United States ▾

**Address Line 1** 1400 140TH AVE NE

**Address Line 2**

**City** BELLEVUE

**Primary Contact** ▾

**Contact Phone**

**Contact E-Mail**

**Parent Customer**  Q

[Create Customer Hierarchy](#)

**EBS Cust Num** 01139

**EBS Reg ID** 1073

**Status** Active ▾

**State** WA

**Postal Code** 98005 ▾

[Verify Address](#)

# Phase 2

## Challenge: Data IMPORT

Custom tables and relationships to those tables needed to be created in Oracle Sales Cloud.

Application Composer

Application Common

Objects

Custom Objects

Standard Objects

Common Setup

Relationships

Role Security

Object Workflows

Global Functions

Run Time Messages

Mobile Application Setup

Outlook Setup

Personalization

Web Services

Metadata Manager

Advanced Setup

Copy Maps

Mainline Tasks

Available only outside sandbox.

Common Setup

Custom Subject Areas

E-Mail Templates

Import and Export

Custom Objects

Objects

Action View

Search

Display Label

Table with 4 columns: Display Label, Name, Description, Parent Object, REST Resource

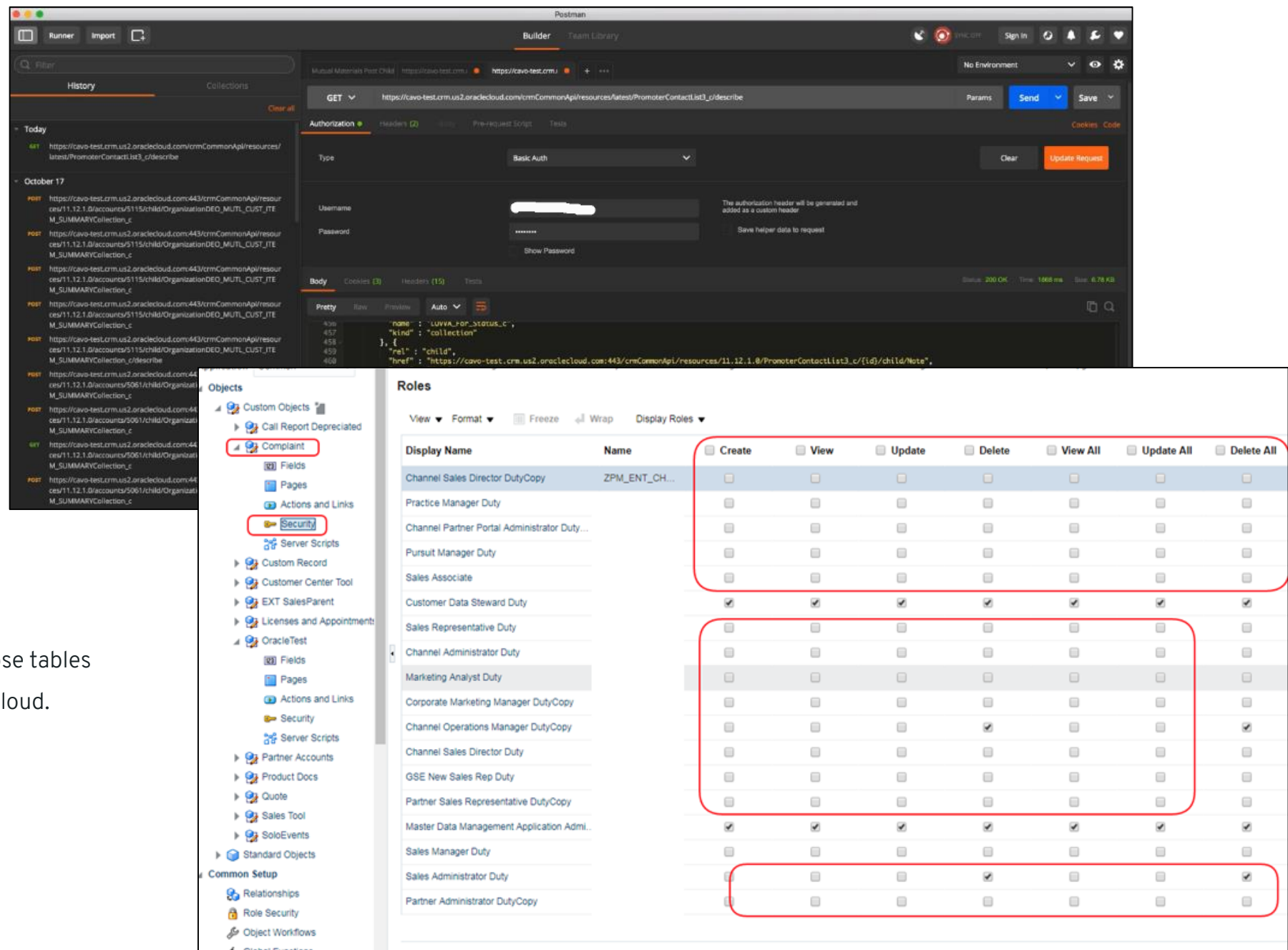
| Display Label             | Na  | Description   | Parent Object   | REST Resource    |
|---------------------------|-----|---|-----------------|------------------|
| Call Report Depreciated   | ... | Call Report Custom Object- Used in Mobile Ap...     |                 | Service Describe |
| Complaint                 | ... | Pre-seeded custom object for Extensibility course   |                 | Service Describe |
| Custom Record             | ... |   |                 | Service Describe |
| Customer Center Tool      | ... | Demo. GSE.  |                 |                  |
| EXT Child                 | ... | Demo. Sample object for extensibility class. Chi... | EXT SalesParent | Via Parent       |
| EXT SalesParent           | ... | Demo. Sample object for Composers class for r...    |                 | Service Describe |
| Licenses and Appointments | ... | Demo. Sample object for HC                          |                 | Service Describe |
| Partner Accounts          | ... |   |                 | Service Describe |
| Product Docs              | ... | Used for DIAB Flow: Decrease Time Selling           |                 | Service Describe |
| Quote                     | ... | Quote object to capture Big Machine Quote hea...    |                 | Service Describe |
| Sales Tool                | ... | Demo. GSE.  |                 | Service Describe |
| SalesLeadDeals            | ... | Intersection Entity generated by M:M Relationship   |                 | Service Describe |
| SoloEvents                | ... |   |                 |                  |
| Stepwise Quote            | ... |   | Opportunity     |                  |



## Phase 2

## Challenge: Data IMPORT

Custom tables and relationships to those tables needed to be created in Oracle Sales Cloud.



# Phase 3

## Challenge: Error Handling

1. Loss of data and import validation
2. Import errors, error handling, and no automatic retrying
3. No error notifications
4. False positive error messages due to job scheduling limitations





# Executing a Hybrid Approach

Yes, that's Crocobear.



DataVaya

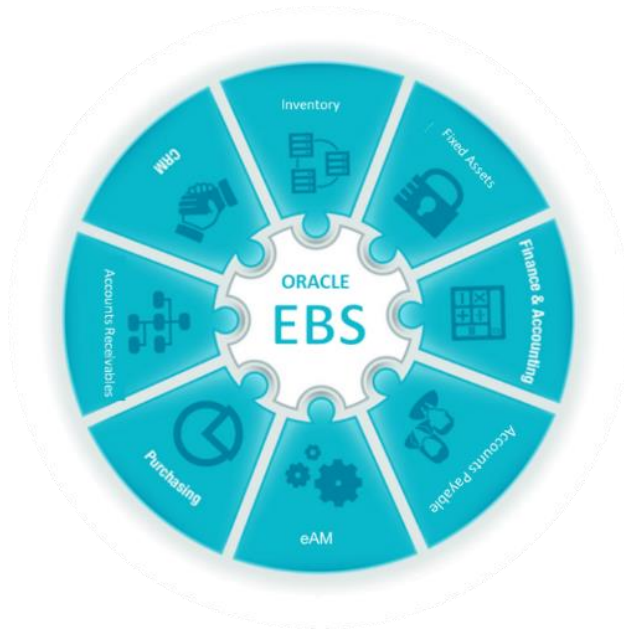


# First Use Case

DataVaya

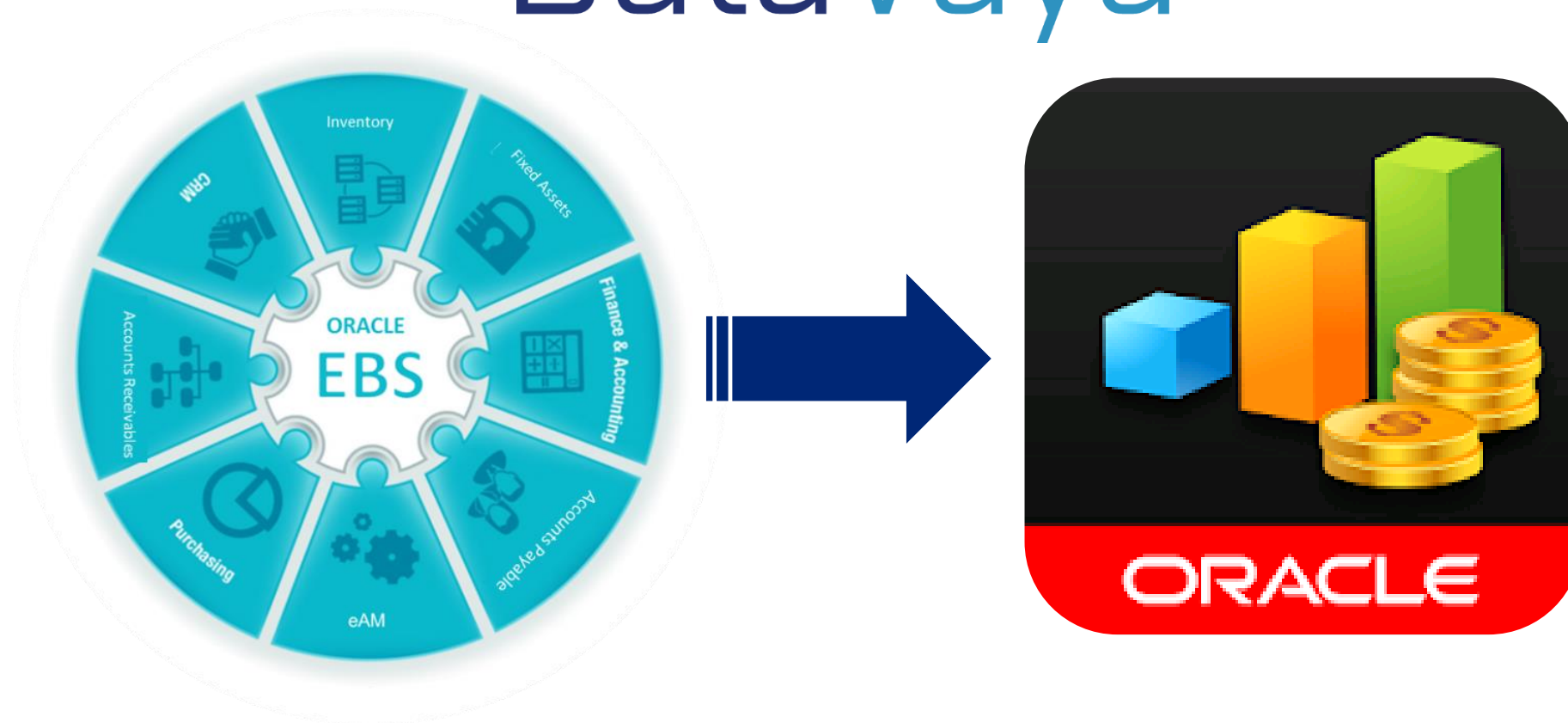


EDI



# What Else?

# DataVaya





# Why DataVaya?

## Complete Data Transfer Solution

1. Supports Oracle's recommended Hybrid approach
2. Requires no development to support or maintain
3. Provides error handling



The background image is a dark, atmospheric scene. It appears to be a large, ancient hall or temple. In the center, a person wearing a dark, long-sleeved dress stands with their back to the camera, looking towards a distant, brightly lit area. The hall is filled with tall, ornate columns that have many small, glowing windows or openings. On the floor, there are several circular platforms or altars, each surrounded by a ring of small, warm-toned lights. The overall color palette is dominated by deep blues and blacks, with the warm lights providing a focal point of contrast.

# Inside DataVaya

What do we say to the God of Death? Not today!

Create or edit an Event

ID

2001

Type

Local File Search

Description

Customer Sales Summary Create - File Poll - /tmp - CUST\_SALES\_SUMMARY.csv

Directory

/tmp

File Pattern

CUST\_SALES\_SUMMARY.csv

Error Email

error@outlook.com

☒ Fifo

☒ Enabled

☒ Attach Trigger File

Cancel

Save



# File Configuration

Create or edit a CSV Configuration ✕

ID

2051

Action Name

Customer Sales Summary Create - Map CSV

Action Description

Customer Sales Summary Create - Map CSV

Delimiter

,

Skip Header Rows

1

Record Separator

\n

| Column | Name        |   |
|--------|-------------|---|
| 4      | EBS_ACCT_NO | - |
| 5      | PartyNumber | - |
| 6      | SSUM_ID     | - |
| 8      | MONTH_TRANS | - |
| 9      | MONTH_SALES | - |
| 10     | MONTH_DATE  | - |
| 11     | CURRENCY    | + |

Cancel

Save

# Rest Action

Create or edit a Rest Action ✕

ID

2052

Action Name

Customer Sales Summary Create - Rest Batch Import

Action Description

Customer Sales Summary Create - Rest Batch Import

Request Url

https://doesnotexist.oraclecloud.com/crmCommonApi/resources

Username

user

Password

.....

Token Directive

Error Processing Type

Continue With Chain

Http Method

POST

Http Header

| Key          | Value  |
|--------------|--|
| content-type | application/vnd.oracle.adf.batch+json <span>+</span> |

Repeat Body

☒

Header

{  
  "parts":[

Body

{  
  "id": "<SSUM\_ID>",&br/>    "path": "/latest/accounts/<PartyNumber>/child/CUST\_SALES\_SUMMARY\_COLLECTION",&br/>    "operation": "post",&br/>    "payload": {  
      "EBS\_ACCT\_NO": <EBS\_ACCT\_NO>,&br/>      "RecordName":<SSUM\_ID>,&br/>      "MONTH\_TRANS\_c":<MONTH\_TRANS>,&br/>      "MONTH\_SALES\_c":<MONTH\_SALES>,&br/>      "MONTH\_DATE\_c":<MONTH\_DATE>,&br/>      "Currency\_c":<CURRENCY>  
    }  
  }  
}

Footer

]  
}

Cancel Save

# Email Configuration

Create or edit a Email Action

×

ID

2053

Action Name

Customer Sales Summary Create - Email Confirmation

Action Description

Customer Sales Summary Create - Email Confirmation

To

receiver@outlook.com

Subject

Customer Sales Summary Complete

From

datavaya@dvhost

Body

Customer Sales Summary Import Complete!

Event Status can be view here:

<EVENT\_STATUS\_LINK>

Repeat

☐

Attach Event File

☒

Cancel

Save



# Action Chain

— Customer Sales Summary Create - File Poll - /tmp - CUST\_SALES\_SUMMARY.csv

Upload

| Chain ID | Action   |  |
|----------|--|--|
| 2101     | Customer Sales Summary Create - Map CSV            | <a href="#">View</a> <a href="#">Edit</a> <a href="#">Delete</a> |
| 2102     | Customer Sales Summary Create - Rest Batch Import  | <a href="#">View</a> <a href="#">Edit</a> <a href="#">Delete</a> |
| 2103     | Customer Sales Summary Create - Email Confirmation | <a href="#">View</a> <a href="#">Edit</a> <a href="#">Delete</a> |



View



Edit



Delete



View



Edit



Delete



View



Edit



Delete

# Error Status Confirmation

**Status Date**

Mar 21, 2018, 10:49:17 AM

**Status Code**

ERROR

**Status Message**

REST Request Failed. Reason: Unable to execute rest request. Reason: java.net.UnknownHostException: doesnotexist.oraclecloud.com: nodename nor servname provided, or not known

**Event**

[Customer Sales Summary Create - File Poll - /tmp - CUST\\_SALES\\_SUMMARY.csv](#)

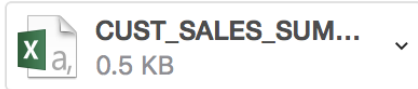
**Trigger File**

[CUST\\_SALES\\_SUMMARY.csv](#)

**Option**[Reprocess](#)[Upload](#)**Action Statuses**

| Status Date               | Status Code | Status Message  | Action   |
|---------------------------|-------------|---|--|
| Mar 21, 2018, 10:49:17 AM | SUCCESSFUL  | Successfully parsed CSV   | <a href="#">Customer Sales Summary Create - Map CSV</a> <a href="#">View</a>           |
| Mar 21, 2018, 10:49:17 AM | IN_PROGRESS | Entering Rest Request   | <a href="#">Customer Sales Summary Create - Rest Batch Import</a> <a href="#">View</a> |
| Mar 21, 2018, 10:49:17 AM | ERROR       | Unable to execute rest request. Reason: java.net.UnknownHostException: doesnotexist.oraclecloud.com: nodename nor servname provided, or not known | <a href="#">Customer Sales Summary Create - Rest Batch Import</a> <a href="#">View</a> |

# Error Email Notification



 [Download All](#)

 [Preview All](#)

Dear Admin,

There was an error for an event with id: 2151

Status Date: 3/21/18 10:42 AM

Status Code: ERROR

Status Message: REST Request Failed. Reason: Unable to execute rest request. Reason: java.net.UnknownHostException: doesnotexist.oraclecloud.com: nodename nor servname provided, or not known

<https://datavayahost:9091/#/event-status/2151>

Regards,

DataVaya Team. Support phone: 804.897.1600 x3 Support email: [support@strsoftware.com](mailto:support@strsoftware.com)



# Success Status Confirmation

**Status Date**

Mar 21, 2018, 10:51:42 AM

**Status Code**

SUCCESSFUL

**Status Message**

File /tmp/CUST\_SALES\_SUMMARY.csv has kicked off event 2001

**Event**

Customer Sales Summary Create - File Poll - /tmp - CUST\_SALES\_SUMMARY.csv

**Trigger File**

CUST\_SALES\_SUMMARY.csv

**Option**

Reprocess

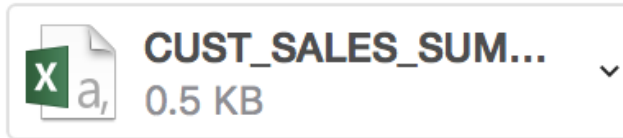
Upload

**Action Statuses**

| Status Date               | Status Code | Status Message   | Action   |                 |
|---------------------------|-------------|--|--|-----------------|
| Mar 21, 2018, 10:51:42 AM | SUCCESSFUL  | Successfully parsed CSV                                      | Customer Sales Summary Create - Map CSV            | <div>View</div> |
| Mar 21, 2018, 10:51:42 AM | IN_PROGRESS | Entering Rest Request  | Customer Sales Summary Create - Rest Batch Import  | <div>View</div> |
| Mar 21, 2018, 10:51:42 AM | SUCCESSFUL  | 0 - 100 - Request successful, status code: 200 - Message: OK | Customer Sales Summary Create - Rest Batch Import  | <div>View</div> |
| Mar 21, 2018, 10:51:42 AM | IN_PROGRESS | Entering EmailAction   | Customer Sales Summary Create - Email Confirmation | <div>View</div> |
| Mar 21, 2018, 10:51:44 AM | SUCCESSFUL  | EmailAction request completed.                               | Customer Sales Summary Create - Email Confirmation | <div>View</div> |

# Success Email Notification

[Show Details](#)



[Download All](#)



[Preview All](#)

**Customer Sales Summary Import Complete!**

Event Status can be view here:

<https://datavayahost:9091/#/event-status/2151>



# DataVaya

1

Automates data collection and file transfers between On-Premise and Cloud applications

2

Used in Asset Maintenance to automatically gather and update meter readings and collection plans in Oracle eAM

3

Used in Oracle Process Manufacturing to gather data from PLC/SCADA systems and transfer it automatically to OPM



# What's Next for DataVaya



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22  
Countries



1,344  
donuts per year  
(approximately)



**Q&A**

# Ted Chappell

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/in/tedchappell/



Oracle Analytics, BI and Big Data  
Special Interest Group

