OATS - Oracle Application Testing Suite

Submitted By

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15MCEC08

DEPARTMENT OF COMPUTER ENGINEERING

INSTITUTE OF TECHNOLOGY

NIRMA UNIVERSITY

AHMEDABAD-382481

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OATS- Oracle Application Testing Suite

Major Project

Submitted in partial fulfillment of the requirements

for the degree of

Master of Technology in Computer Science and Engineering

Submitted By

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Guided By

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DEPARTMENT OF COMPUTER ENGINEERING

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Certificate

This is to certify that the major project entitled **"OATS- Oracle Application Testing Suite"** submitted by **Priya Daxini (Roll No: 15MCEC08)**, towards the partial fulfillment of the requirements for the award of degree of Master of Technology in Computer Science and Engineering of Nirma University, Ahmedabad, is the record of work carried out by her under my supervision and guidance. In my opinion, the submitted work has reached a level required for being accepted for examination. The results embodied in this major project part-I, to the best of my knowledge, haven't been submitted to any other university or institution for award of any degree or diploma.

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Statement of Originality

I, **Priya Daxini**, Roll. No. **15MCEC08**, give undertaking that the Major Project entitled "**OATS- Oracle Application Testing Suite**" submitted by me, towards the partial fulfillment of the requirements for the degree of Master of Technology in **Computer Science & Engineering** of Institute of Technology, Nirma University, Ahmedabad, contains no material that has been awarded for any degree or diploma in any university or school in any territory to the best of my knowledge. It is the original work carried out by me and I give assurance that no attempt of plagiarism has been made.It contains no material that is previously published or written, except where reference has been made. I understand that in the event of any similarity found subsequently with any published work or any dissertation work elsewhere; it will result in severe disciplinary action.

Priya Daxini

Date: 20th May, 2017

Place: Ahmedabad

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Abstract

One of the vertical of Oracle is in retail industry that helps users to perform tasks in all manners from receiving merchandise from Suppliers or Partners to deliver those merchandise or services to end users of the industries, customers. I have worked on some of the products used in Oracle Retail called Retail Merchandising System (RMS), Retail Sales Audit (ReSA).

RMS performs like a skeleton of the Retail body. The purpose of having RMS in this vertical is to provide all the basic necessary help to the industry to perform other transactions to make the system work. The functionality of RMS includes managing all sort of foundation data of the system like adding suppliers or partners, adding items, managing merchandise hierarchy, managing organizational hierarchy, and much more that would be required to perform a transaction with the system.

ReSA on the other hand is acronym of Retail Sales Auditing tool that helps audit the sales at the end of session duration whether there are any mistakes in the calculations of sales, by salesman or billing machines or anything.

I, being part of Quality Assurance team, perform tasks to check the quality of the product. So far,I have worked on libraries that are used by automation team to do the testing of the software. We have created test cases of the whole system as well.

Other than that, I have created dashboard for the solution, that shows the overall analysis of the test scenarios ran in last week using Oracle JET. I've also started working on Launcher using which one can configure the run and also get to know the progress of the run that is going on. In addition to that I've worked on Launcher that helps configuring the run and helps us use the same configuration multiple time. Also it gives analysis of the time it'd need to complete the task.

Abbreviations

IDE	Integrated Development Environment
OJET	Oracle JavaScript Extension Toolkit
LC	Line of Credits
ReSA	Retail Sales Audit
RMS	Retail Merchandising System
SVN	Subversion

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Chapter 1

Introduction

1.1 General Idea about Products

1.1.1 RMS

Retail Merchandising System (RMS) is the main product that makes the platform ready to move on with the retail business. It has the required data to deal with a product or item in any manner, like selling or buying the item would need to have a supplier data first, then the item must exist with the quantity information and likewise. The following clusters exist in Oracle RMS to make the business work. Each functional area has business processes designed to help you complete a task related to that cluster.

- Foundation Data
- Items
- Cost
- Price
- Orders
- Inventory
- Replenishment
- Import Management
- Finance

- Application Administration

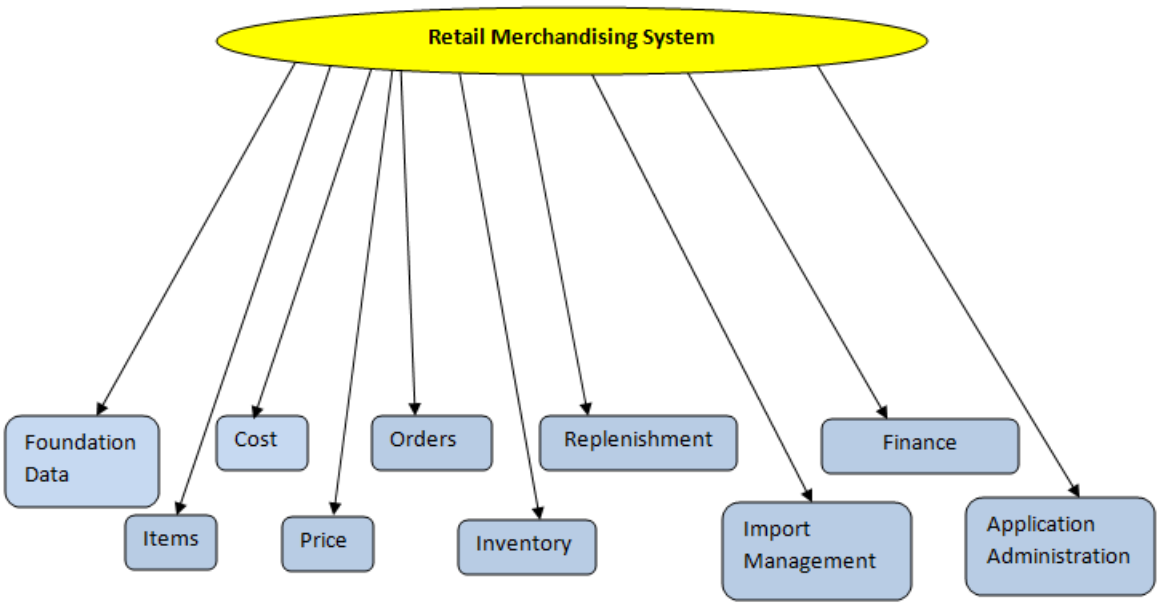

Figure 1.1: RMS Cluster information

Foundation Data

It includes functionalities like data loading from external system that includes downloading, uploading and review status of loaded data. FD also includes Organizational Hierarchy that includes crud operations over Chain, Area, Region, District, Store and warehouse. FD also works to have location list, cost zones. It also works to have crud operations to have Supplier and partner information, expense details, Merchandise hierarchy for items that includes crud operation over Division, Group, Department, Class, Subclass

Items

It includes functionalities to maintain items within the location. Like adding new items in the stock, creating production restrictions, downloading items from staging and RMS, uploading to staging or RMS, Working on Pack templates like creating/managing.

Cost

Cost includes functions related to cost change, like create a cost change, manage cost changes, download and upload data external Systems.

Price

It deals with the Price changes history, Coupons.

Orders

Creating Orders, managing orders, Having contract based orders, DSD orders, dealing with pre-issued order numbers, downloading and uploading order details from external system. Order cluster also deal with the deals and contracts of the order.

Inventory

Inventory cluster deals with the stock of the items in the particular location. In order to do so, it has modules like item inventory by location, item sales data, sellable pack inquiry, transfers, shipments and receipts, inventory adjustment by item or location.

Replenishment

Replenishment cluster deals with the transfer of items from one location to another to maintain the stock over all everywhere. In this module we dont talk about ordering stuff from vendor, but rather its just moving from one of our own location to another location. So in order to do that it has to have priority groups. It needs to deal with the replenishment attributes. It needs to define replenishment attributes.

Import Management

Import management takes care of the letter of credits. It creates, manages, and sends the LC. It also defines the transportation rules the vendors have to follow. Creating custom entries and managing the same comes under the same cluster. Creating and managing obligations are also this cluster's duty.

Finance

Finance cluster deals with Stock ledger of the company, it allows the user to download the Stock Ledger. Also it deals with the transaction data. It also deals with the average cost adjustment. Also it will take care of the receipts adjustments by cost.

Application Administration

Since RMS is highly customizable application, Application Administration is very crucial cluster of RMS as it gives all the admin rights to the user that can change the game. It allows to setup the System options, future Cost events, report Options.

1.1.2 ReSA

Retail Sales Audit product helps RMS to have accurate data. Its main objective is to audit the calculations done by Point Of Sales products. Whatever data has come from POS has to go through ReSA to know the accuracy before passing it to RMS.

This process validates the totals from POS against the calculated totals of transactions. If both of the totals differ with grater value than valid variance, it has to be thrown as an error and the transaction has to wait for further instructions to get into RMS.

1.2 Dashboard for Automation Solution

Dashboard is a crucial part of the automation solution as it contains graphical representation of analysis of all the test scenarios took place in last week. Information has been given cumulatively as well as separately for each cluster.

Upper part of dashboard gives data in table format that contains dataset wise information, Pass Fail summary, all the configurations on which dashboard is showing information like time duration config env, actual and expected env info and info about last run. Then comes the module that give Line Area chart of last 7 days data summary of pass, data failure, execution failure, validation failure. The chart can be represented in multiple forms.

Then comes the Pie chart of total pass / fail execution. Table beside that pie chart talks about the dataset wise based on whichever has been selected in pie chart. Below to that is a execution summary of each test scenario that gives us machine info, user info, total time taken for each scenario, result link of that test scenario. Below to that is over all summary dataset wise that gives us cumulative information of entire week.

Landing page of the dashboard is home page that displays piechart, representing information clusterwise and overall pass / fail in the last week.

1.3 Launcher for Automation Solution

Launcher is the key part of the solution as it is being used to start the test scenarios. All the configurations have to be given in the Launcher to get the download file. Download file is a batch file that helps in accessing Client side machine. Using downloaded batch file, we can setup the input files that have to be overwritten first. Then accessing the batch file as administrator to start the configured run with given inputs.

Left part of Launcher helps to give configuration that we seek to run. UI of the Launcher has been set using Oracle JET that is mainly used to get better user interactivity using which the Launcher is capable of handling events very well.

Right part of the Launcher helps in understanding the time duration configured run will take to complete. In order to do that, we need to have analyze the behaviour of configured entity in the given environment. Different environments may have different behaviour for the same entity. If script action is set to run all entities together then adding up average behaviour of all entities in that environment separately helps in getting out the required analysis.

Chapter 2

Literature Survey

My entire internship has gone through 4 stages, I may say. I've worked on 4 different products. Out of which two of them I have automated and the other two I have created.

2.1 Motivation

Earlier the Deal module of RMS product was never automated for testing purpose. So it used to take lot of efforts for people of manual testing team to know the stability of that module in the product. So I was asked to come up with the solution to make it automatic the way it would take least human efforts to know the stability of Deal module.

Earlier entire ReSA product used to be tested manually. Since ReSA is all about crosschecking calculations with respect to given POSU Flat File, it takes of efforts manually to test all the scenarios. Plus worse part is, the Flat File ReSA takes as input is having least readability. Dealing with that file itself is very critical task. Automating this Product would add up lot of values in the solution.

Earlier there was no way of letting the upper management or other teams or our own team know about the progress of Automation solution stability or product stability in that specific environment. Now since knowing the progress is key part for any solution, I have come up with the Dashboard that helps in analysing the scenarios.

Traditional method of activating run doesnt include any way to understand how much time the given configuration will take to complete the task. Since the workload of that

machine can not be analyzed in advance without knowing the run time in advance, it became critical for the team to understand the analytical behaviour of each entity in advance.

2.2 Importance of Automation

Since after automating the RMS Deal module, the human interaction became the least for testing the environmental behaviour of Deal, it started saving time for the team to work on more important stuff that needs more interaction.

Later the same scenario happening for ReSA testing, but in RMS the flow was fixed to be followed. It was just like the way entire team had automated other RMS modules. Here the flow itself was to be decided. ReSA is a product used for auditing. So checking stability of the product required lot of calculations as ReSA is all about auditing sales calculations. Automating this product has solved a big problem for the team asthey need not go through the calculations manually anymore.

Here is a brief literature survey of what all products I have worked with.

2.3 RMS - Deals

2.3.1 Flow Of Deals Module

Deals module allows you to maintain your relationship with vendors that can be a distributor, a manufacturer, a supplier or a wholesaler.[1] Every deal is made of deal components, each needs to have components.A single deal can have multiple components.

After defining components, each component needs to have item and locations associated with that component. Each component can have multiple item - location associated with that. and then we add threshold to that component. One threshold is required for that component to work.

2.3.2 Types of Deals

Major Types of the deals are two, Fixed deal and Complex deal as can be seen in the Figure 2.1.

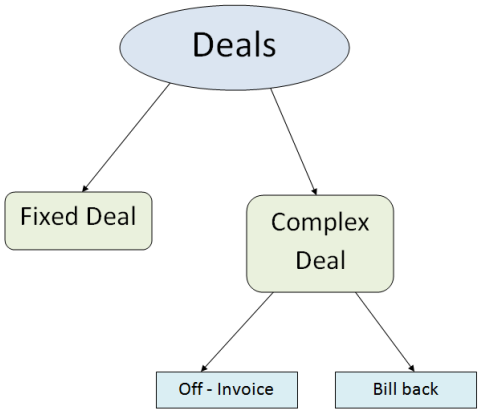

Figure 2.1: Types of deals

Fixed Deals

Fixed deals are created when the deal data is meant to be used for doing promotional work or say mentoring products or just keeping some products on display for sometime on shelf. You can generate deal whenever you need and then you may schedule the payments as per requirements. You can even take the payments incrementally.

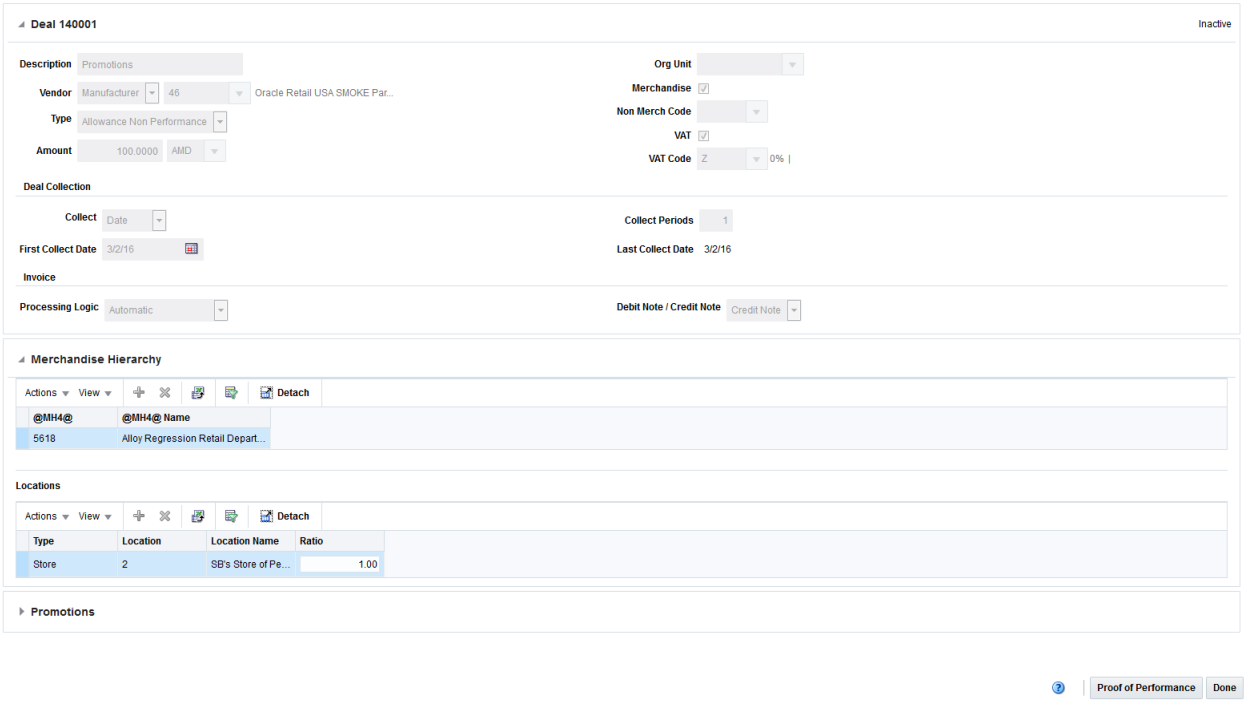

Figure 2.2: Fixed Deal

Complex Deals

Complex deals are more customizable and flexible for user to reuse the same deal for a specific duration.

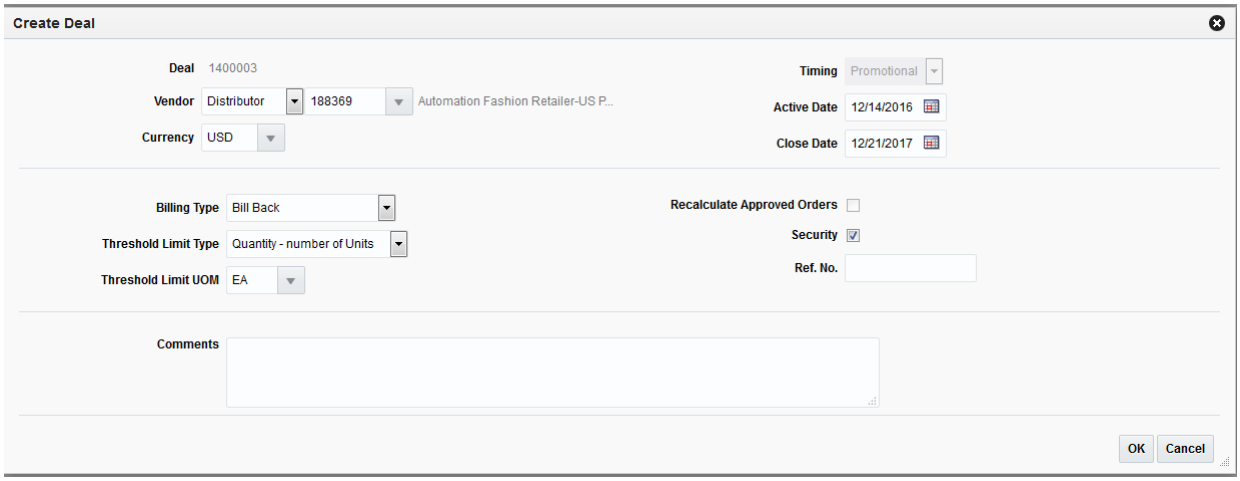

Figure 2.3: Complex Deal - First screen

Complex deal has two basic types of the deals :

- **Off-Invoice Deals** : Off-invoice directly works on the receipts and reduces amount on the bill itself. It has the ability to effect the invoice directly. So the vendor would get the discounted payment directly.

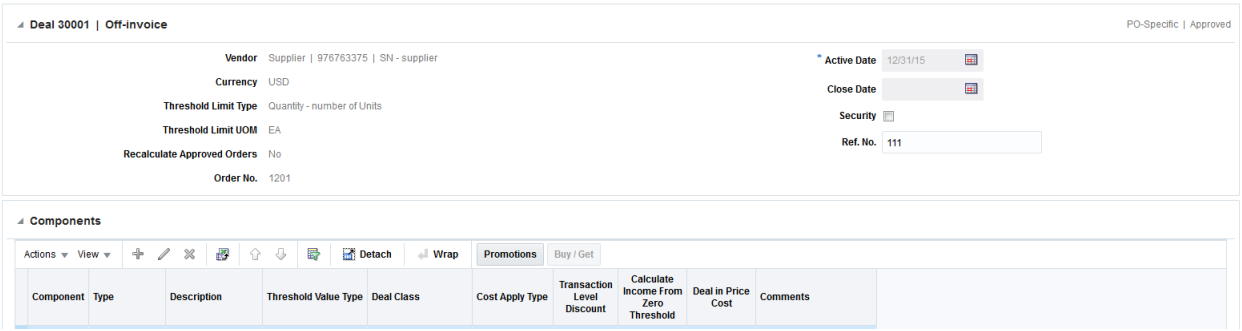

Figure 2.4: Off-Invoice Deals

- **Bill Back Deals**: Billback deals are the ones in which the invoice wont get affected, rather it gets triggered after a specific time duration or occurance of some events. That will be calculated on each bill or order. Types of special bill backs:
  - **Bill Back Deals** :

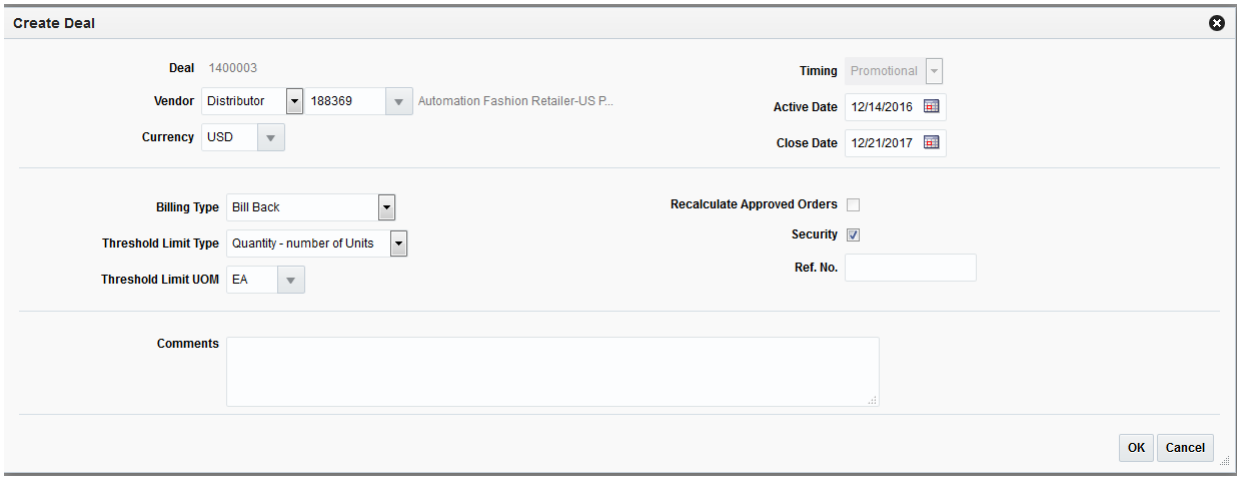

Figure 2.5: Bill Back Deals

– **Bill Back Rebates**: Bill Back Rebate Deals are created when your organization receives money back from the supplier after you achieve a certain performance. Rebate deals can be based on:

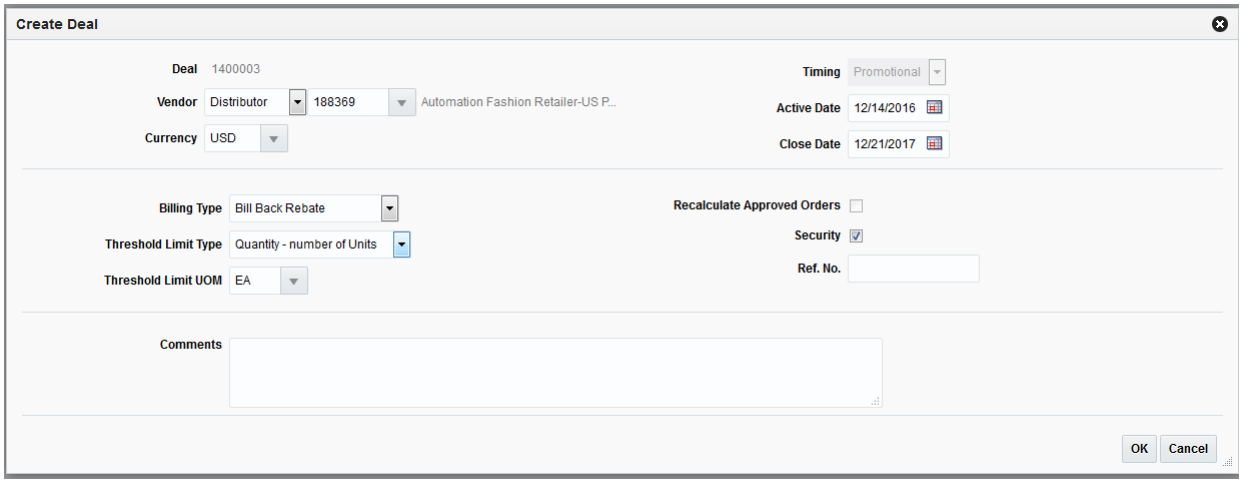

Figure 2.6: Complex Deal - Bill back Rebate

* **Sales**

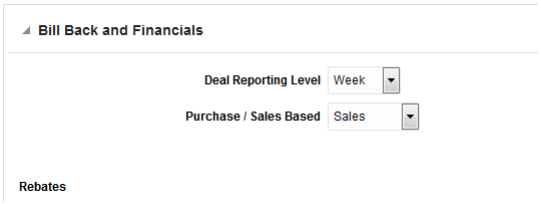

Figure 2.7: Complex Deal - sales based Bill back Rebate

* **Purchase Order**

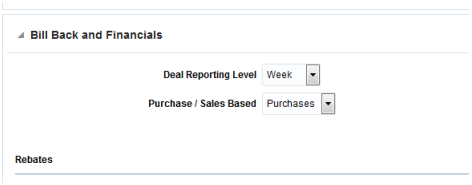

Figure 2.8: Complex Deal - purchase based Bill back Rebate

2.4 ReSA

2.4.1 Flow of ReSA

As we can see in the image 2.9, ReSA gets data from POS to verify the calculations, if its bearable then the data would be passed to RMS. if the errors are beyond limit then the errors will be given and need to resolve those first to do further stuff. Retail Sales Audit product helps RMS to have accurate data. Its main objective is to audit the calculations done by Point Of Sales products. Whatever data has come from POS has to go through ReSA to know the accuracy before passing it to RMS.

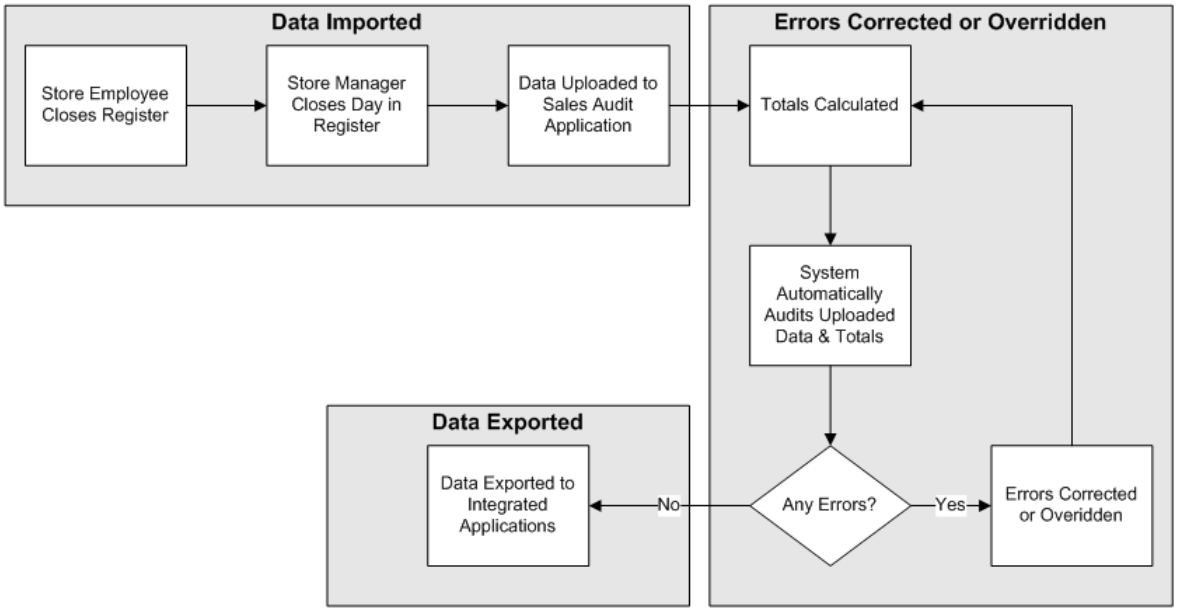

Figure 2.9: Retail Sales Auditing flow

2.4.2 Objective of ReSA

Retail Sales Audit product helps RMS to have accurate data. Its main objective is to audit the calculations done by Point Of Sales products. Whatever data has come from POS has to go through ReSA to know the accuracy before passing it to RMS. If the data is not upto requirement, it will be reported back to PSO operator and the process will be halted till ReSA gets the proper data. If the data is upto date, RMS will import the same files for further process.

ReSA has a list of batch files to run. What those batch files would do is to validate the totals given by POS to the calculated ones. If they turn out to be fine, the data would be sent to RMS. If the calculations are not equal, it will be reported back to the POS operators which needs to be resolved.If they turn out to be fine, the data would be sent to RMS. If the calculations are not equal, it will be reported back to the POS operators which needs to be resolved. Batches like SASTDYCR, SAGETREF, SAIMPTLOGI etc would do the all required steps to be followed

It can isolate irregularities at the point of sale. It reduces the cost of integration between sales audit functionality and other applications such as the Oracle Retail Merchandising System (RMS) and Oracle Retail Analytics (ORA). Audited POS and OMS data, exported from ReSA, provides a single version of data across downstream solutions. It can support reporting and analysis to help reduce losses.

2.5 Dashboard

2.5.1 Flow Of Dashboard

- **Home** : Its a landing page of dashboard. Home page gives overall pass fail status updates in the form of Pie Charts, of individual Cluster as well as an overview of cumulative data also.

- **Overview** : That page talks about all the clusters combined. It starts with dataset info followed by pass fail info. Then comes a pie chart giving pass fail info again, but since its responsive in nature, the table beside that pie chart gives dataset info of whichever module is selected in pie chart. The module is followed by line area

chart giving day wise pass / data fail / execution fail / validation failure information. Then comes run summary which talks about overall run in the last week, dataset and running status both wise.

- **Foundation Hierarchy** : Foundation Hierarchy talks about Foundation cluster ran in the test scenarios.
- Foundation Item : Foundation Items talks about the Item related all the dataset ID combied in Item cluster for the testing.
- **Procurement** : Procurement contains mainly cost change, deals, contract information.
- **Inventory** : Inventory adjustment talks about managing Stock On Hand.
- **Induction** : Induction mainly helps to load data from Stagin to RMS. So tasks related to that cluster are included in that.
- **Import** : Importing data from files being in specific format is being covered in this cluster.
- **XAPI** : XAPI helps to import data from external System.

2.5.2 Objective of Dashboard

Giving statistics in a way the other person can understand the analysis of each RMS cluster in addition to over all analysis

2.6 Launcher

2.6.1 Flow Of Launcher

Configuring the Run

Launcher configuration starts with the branch path where our staging branch has been located in the device. Giving proper path is must as that only can enable us to access the input files for run. After that comes the Product details as my team works on multiple products, we can choose the product from here. Then comes the Script Action Entity. Each entity means calling up one module just like deal. Then comes the Script Action

Support which helps in filtering out few input entities from the given script action. Next section talks about the Datahsheet details as thats the folder structure that is being followed by us for now. It keeps on varying as per the need. Dataset ID defines the dataset we'd like to run. Then comes the Environment details. Expected environment is the we want to test. Actual environment is the stable environment with which we'd want to compare our product stability.

Starting the Run

Launcher.bat has all the configurations saved in the file. Now whenever we need to run that configuration, we just need to run that file and we're done. It can be used multiple times.Benefit of having this file over traditional method is it can be used multiple times. We can have as many launcher files as we need. and all configurations can be used as many times as needed. Traditional method used to overwrite the configurations each time so it was not reusable if its overwritten once.

Analyzing the Run

The run which has been configured to run has to do lot of process like, purge files older than 14 days, running all the configured entities, saving data of that run into a test file and generating html result files, logging into server to upload result files, screenshots to server. All these steps would consume some time so putting analysis of each step into consideration to get the accurate time duration that might take in the running the given entity in the configured environment.

2.6.2 How is launcher useful over traditional method?

Benefit of having this file over traditional method is it can be used multiple times. We can download multiple launcher files as we need to configure our run. All configurations can be used as many times as needed. Traditional method used to overwrite the configurations each time so it was not reusable if its overwritten once. Say if I am running deal entity first and then I'd run fixedDeal entity. But then if I'd need to again run deal then that configuration has not been saved anywhere in the system to do so, so we need to again specify the configuration using traditional method. But using bat file we can use it as many times as we need.

Chapter 3

Technologies

3.1 OpenScript

- Feature of importing library enables us to reuse the code.
- Having ability to prefer browser adds up to solution but firefox is strongly recommended as OpenScript fully supports Firefox.
- Being able to Record every step taken in the recording browser helps us to understand the flow, being able to edit the code helps us automate the way we need.
- You can perform error recovery through various options, like you can set a breakpoint, or print console messages, etc. to track your fault if any.
- OpenScript not only records Browser Activities, but also Java applications activities, as Oracle e-Business Suite is a java based application basically.
- There is an in-built facility to access Databanks. Suppose for example you want to store some data, to be iterated and performed work on later, You can use databanks to do that.
- There are File Acccess Functions given which can be used as our requirements. We are already using these functions in FileAccessLibrary. [2]
- Some more features involve Adobe Flex Test module, Oracle Fusion/ADF Test Module, the Seibel Test Module and Shared Data Module.

- Installing OATS to run our scripts need to have specific installation requirements to be matched. [3]

Fig. 3.1 can give a rough idea about how OpenScript Environment looks like.

Figure 3.1: OpenScript Environment

3.2 NetBeans

- NetBeans is a software development platform written in Java that allows applications to be developed from a set of modular software components called modules.
- Applications based on the NetBeans Platform, including the NetBeans integrated development environment (IDE), can be extended by third party developers.
- It was developed by Sun Microsystems, but now Oracle Corporation owns it.
- It primerly focuses on the Java development, but also supports PHP, C/C++ and HTML.

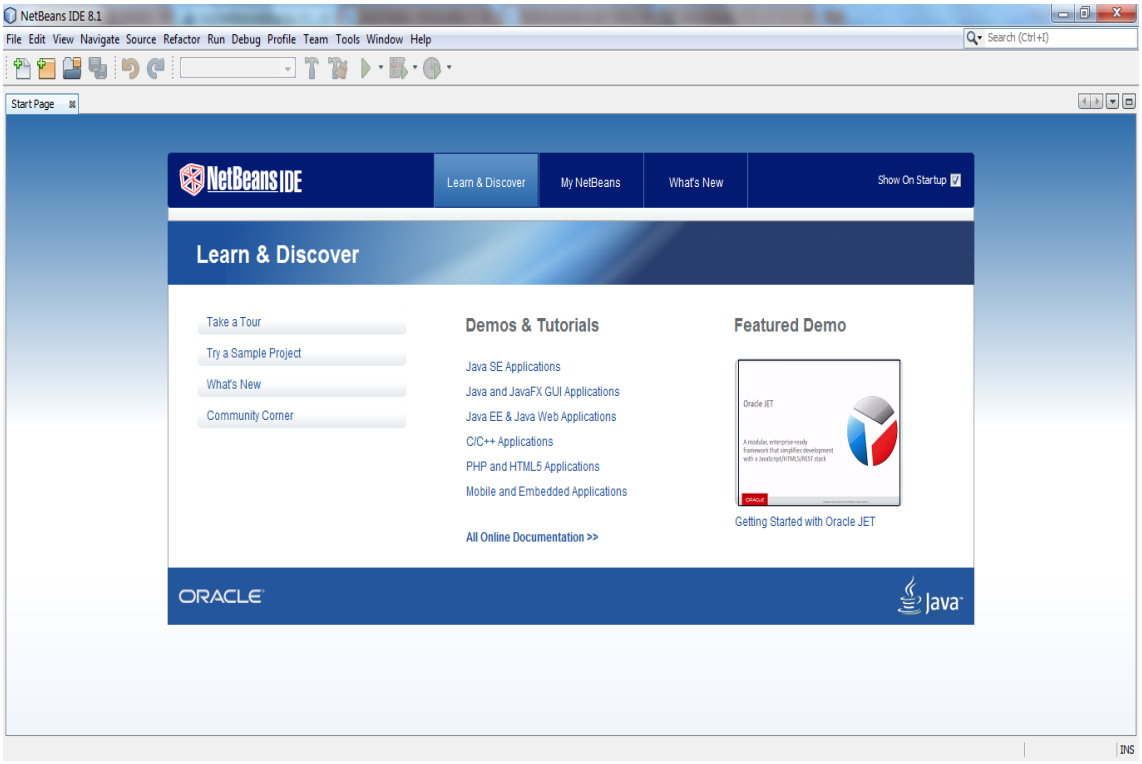

Figure 3.2: NetBeans IDE

3.3 SQL Developer

- Oracle SQL Developer is an environment that is used for development as well as for managing the database in both type of deployments, OnPrem environment or cloud environment.
- Since SQL Developer offers full stack solution of your applications, it supports multiple worksheets to work on multiple applications for accessing scripts and queries.
- It also supports functionalities to import from xls, csv or export your data using multiple formats like xml, pdf, html, text. [4]

Fig. 3.3 can give a rough idea about how SQL developer Environment looks like.

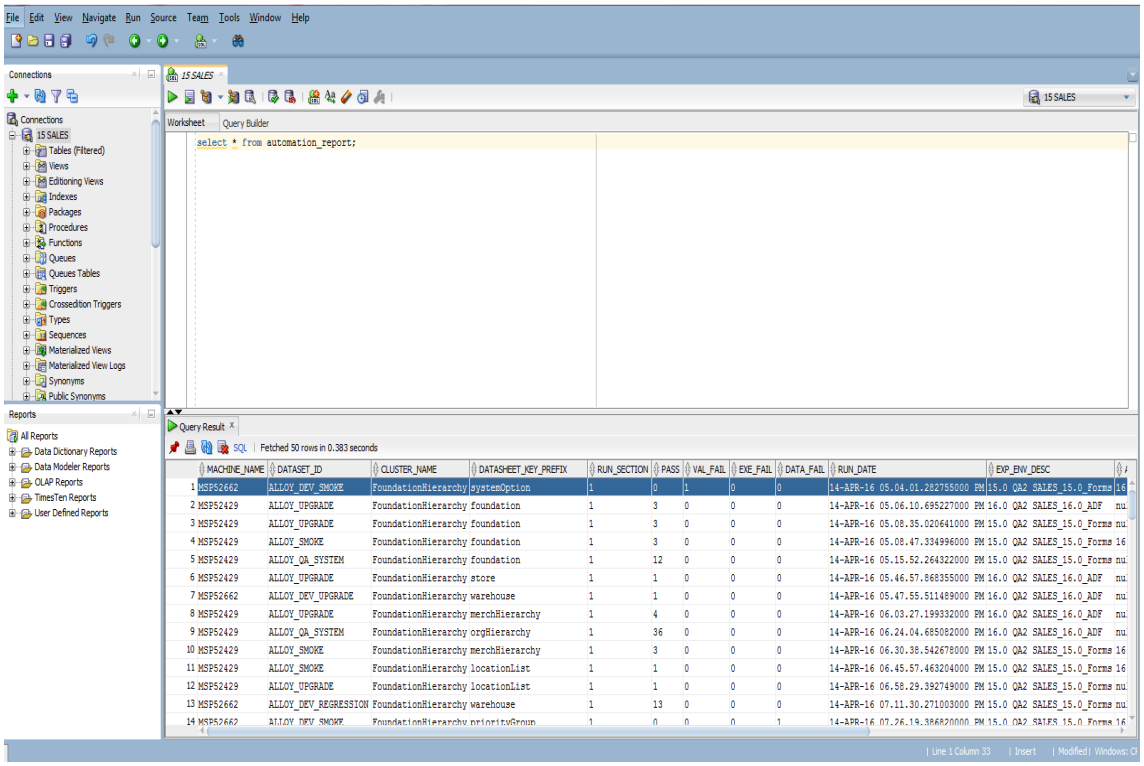

Figure 3.3: SQL Developer

3.4 PuTTY

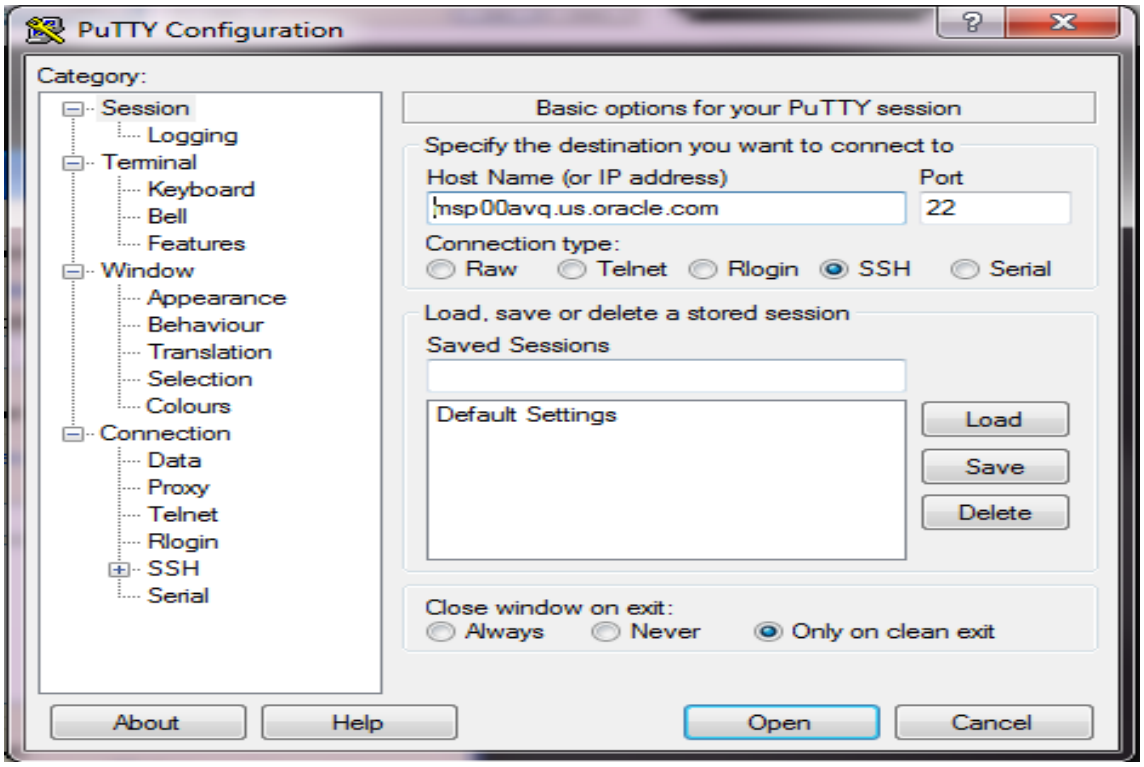

Figure 3.4: PuTTY Environment

We use PuTTY to connect to a multi-user computer using any of the SSH, Telnet or Rlogin methods. Basically, as can be seen in the left most side of Fig. 3.4 [5], we need to provide a Host Name, which then-after asks for your username and password to check if you have enough privileges to log into the multi-user system. SSH, telnet, Rlogin etc. [6] are the network protocols that defines the rules to access the system, and lets you run it. PuTTY consists of multiple modules, like PuTTYgen etc. But we only need basic PuTTY for our necessities like running scripts for loading data in different modules, byr connecting to different servers.

3.5 WinSCP

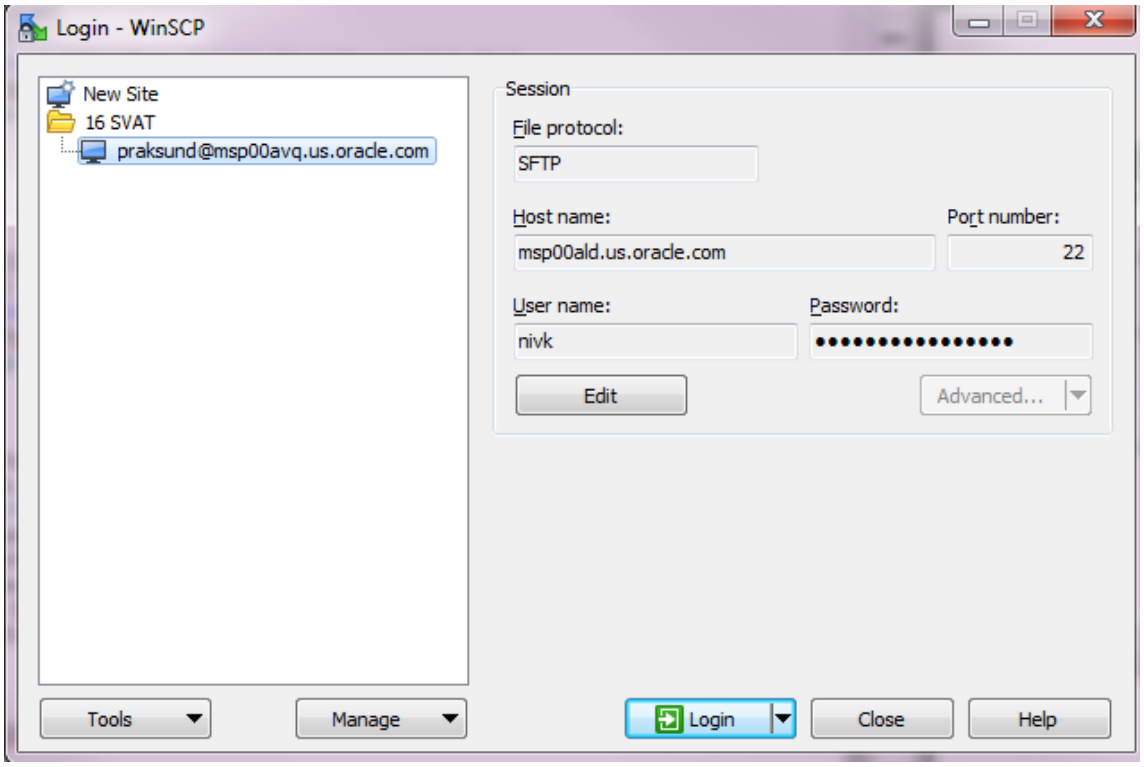

Figure 3.5: WinSCP Environment

Windows Secure Copy is a way of accessing remote server file structure and files. Transfer of files between the Local Machine and Remote Machine WinSCP is based on combination of protocols from PuTTY and FileZilla. Those Protocols are SSH and FTP. On the Left in Fig. 3.5 is your Local System, and on the right you can see the Remote Machine File Structure.

Chapter 4

Technical Details

4.1 Tool Details

Below table 4.1 defines the configuration that is required to run the project on which I have worked. Given below configuration is must to run this application suite.

Having lower versions of the tools might stop the execution of the entire automation. Like, NetBeans IDE 8.2 has the Oracle JET libraries included in the default installation itself, but the older versions don't support Oracle JET libraries. To get the Oracle JET support in the older versions of the NetBeans, one must install JET plugins.

Tool	Version
OpenScript	12.5.0.3.960
WinSCP	5.7.7
PuTTY	0.67
Oracle SQL Developer	4.0.0.13
Firefox	45.0
Netbeans	8.2
TortoiseSVN	1.8.10

Table 4.1: Development Tool Versions

4.2 Local Machine Configuration

	Configuration
Processor	2.6 Ghz
RAM	8 GB
OS	Windows 7 Enterprise
System Type	64-bit OS
HDD	500 GB

Table 4.2: Local Machine Configuration

4.3 Server Machine Configuration

Server Configuration that I have used to run the Dashboard as well as Launcher is as has been defined here.

	Configuration
Processor	2.6 Ghz
RAM	6 GB
OS	Windows 7 Enterprise
System Type	64-bit OS
HDD	500 GB

Table 4.3: Server Machine Configuration

Chapter 5

Implementation

5.1 RMS Automation

5.1.1 Deals Module

Ive coded the automated testing process of deals module. That code would take a specific excel file as an input data file which is full of various of test scenarios, then that is passed to the screens of deals. Values would be automatically put into the field and testified for the validity of the product. The coding includes 3 function libraries and some changes in test scripts.

- **Procurement ADF Library** - In this library Ive coded the main screens to accept the input after fetching data from excel input datasheets.
- **Procurement Download Library** - Download libraries are used to get the results of our run. It gets the data newly inserted into database and put it into excel file for users to read. By using this library we talk about the downloading data from database to excel file.
- **Procurement Validation Library** - This library is used to validate the data. It helps reduce time by letting the script know that the data is not proper to run the script.

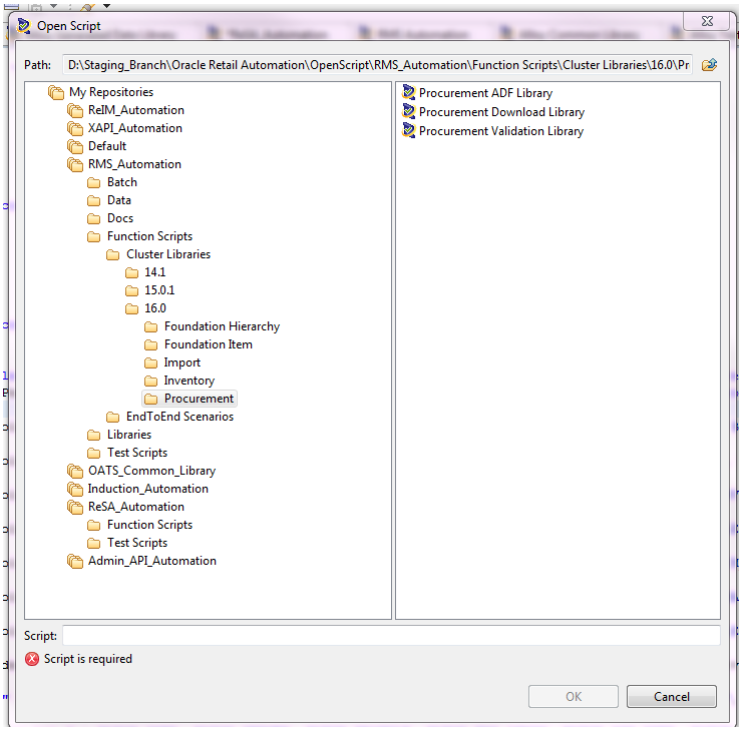

Figure 5.1: Procurement Function Scripts

5.2 ReSA Automation

ReSA codes are all about running batches through automation. So in order to make ReSA bacthes run automatically, Ive created 4 function libraries and a test library named :

- **ReSA Automation** - This library mainly focuses on running the overall flow. Or to say in other words, to start the test scenarios. It comes under test scripts.

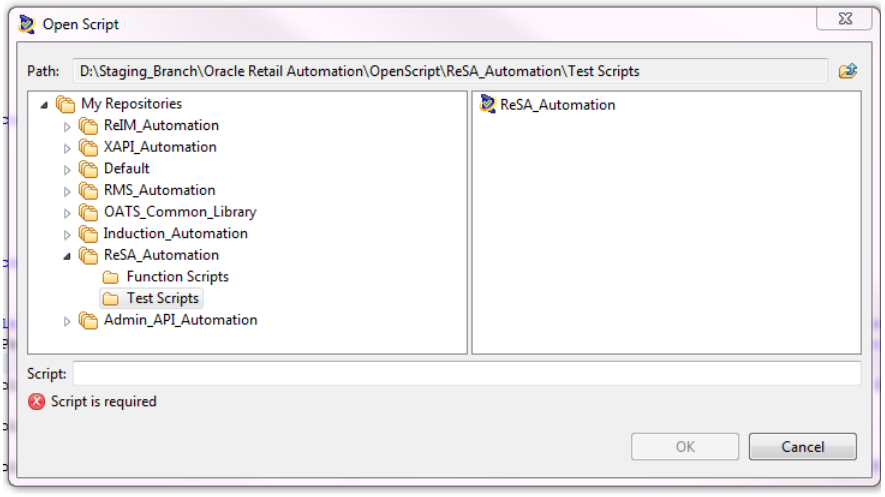

Figure 5.2: ReSA Test Scripts

- **ReSA PreCheck Library** - This library is used to make sure all the prerequisites are being fullfilled to run the script. It helps reduce time by letting the script know that the data is not proper to run the script.

- **ReSA RTLOG Generator Library** - Since our code works for our data, we need to generate the file that we get from POS usually. Generation of that flat file is very hectic task. That will be done in this library.

- **ReSA Batch Library** - All the batches have been listed down in this library to run. In order to do so, the connection also needs to be established with server, that will also be done.

- **ReSA Download Library** - Download libraries are used to get the results of our run. It gets the data newly inserted into database and put it into excel file for users to read. By using this library we talk about the downloading data from database to excel file.

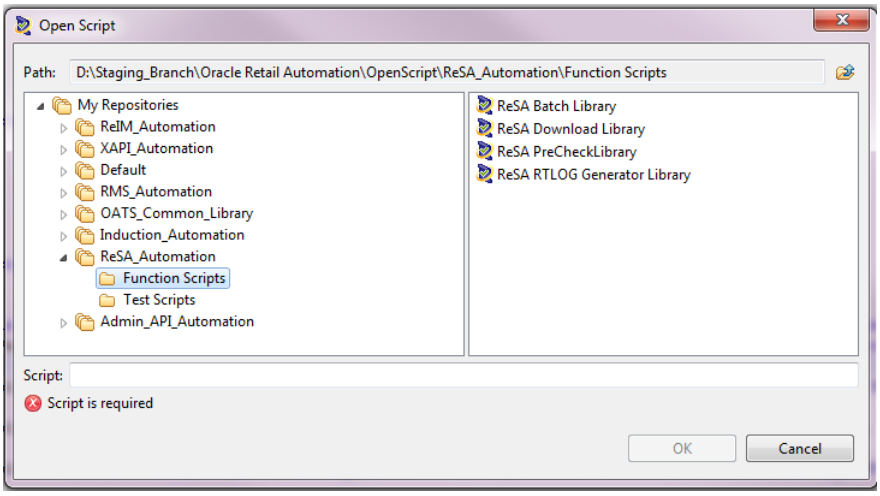

Figure 5.3: ReSA Functions Scripts

5.3 Dashboard

At the end of the production run, the test results would be mailed to the email list defined in the EMAIL_TO given in the configuration file. If the EMAIL_ENABLED is set to false, the mail would not be sent at the end, hence the Dashboard link can be disabled also.

Link of the dashboard is been given at the bottom of the report mail of each test result as shown in figure 5.4

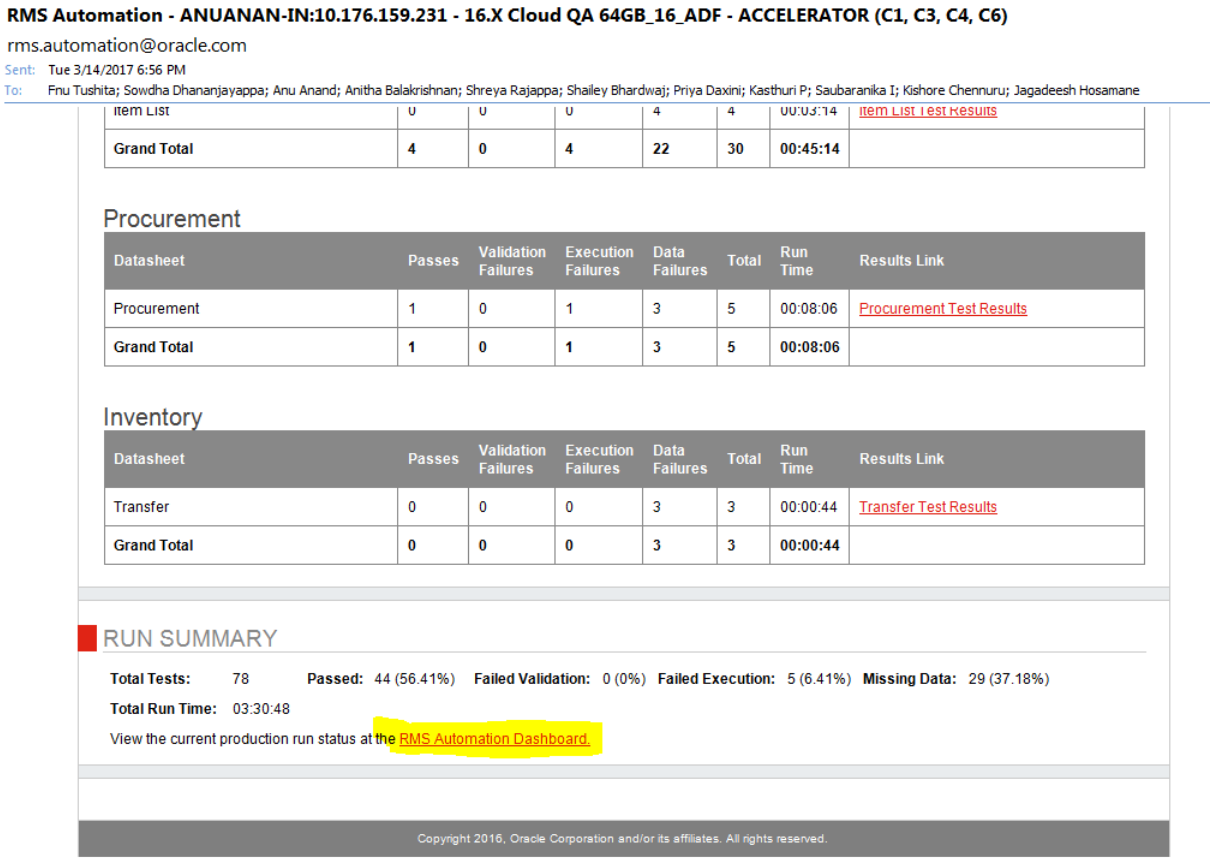

Figure 5.4: Dashboard Mail Link

Its a landing page of the dashboard giving pass fail status summary of each cluster as pie chart.

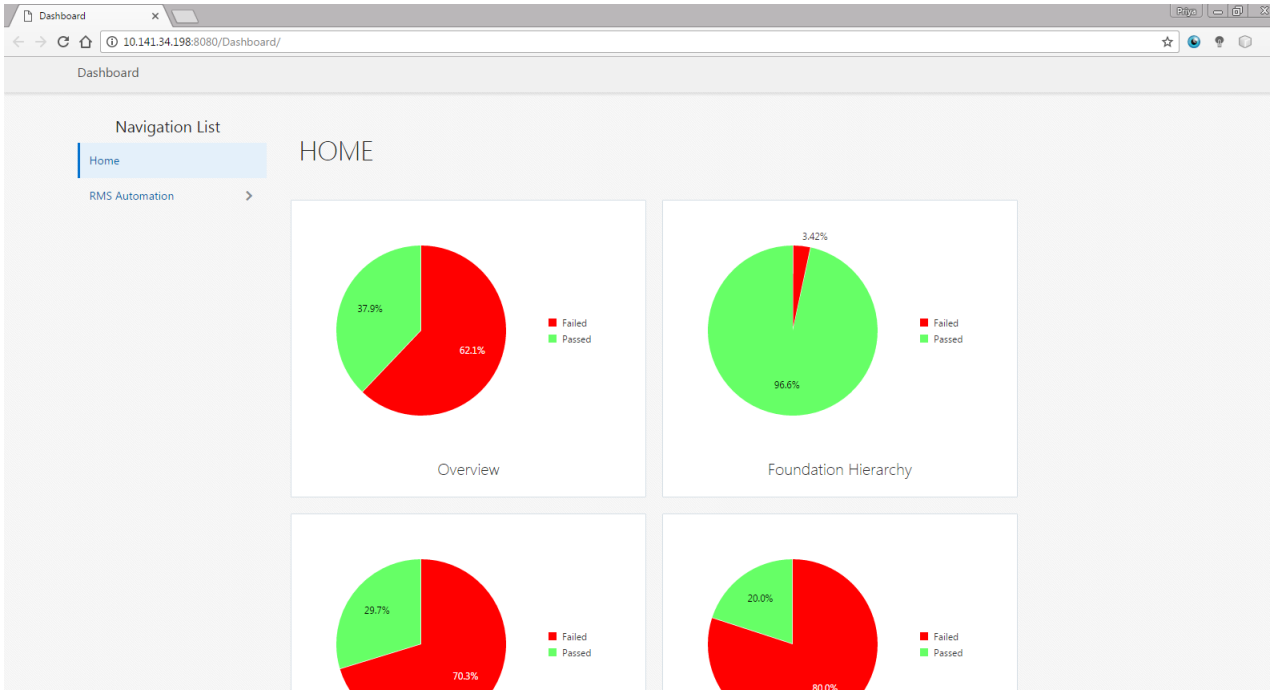

Figure 5.5: Dashboard Home

RMS has multiple Clusters which all show the same sort of UI. Even the functionality wise it behaves same in dashboard. First Part of each cluster page shows dataset statistics, pass fail statistics of choosen environment from configurations shown on the right top corner. All that is followed by a line area chart that shows day wise run status (pass / data fail / execution fail / validation fail) of run happened within configured env in last 7 days.

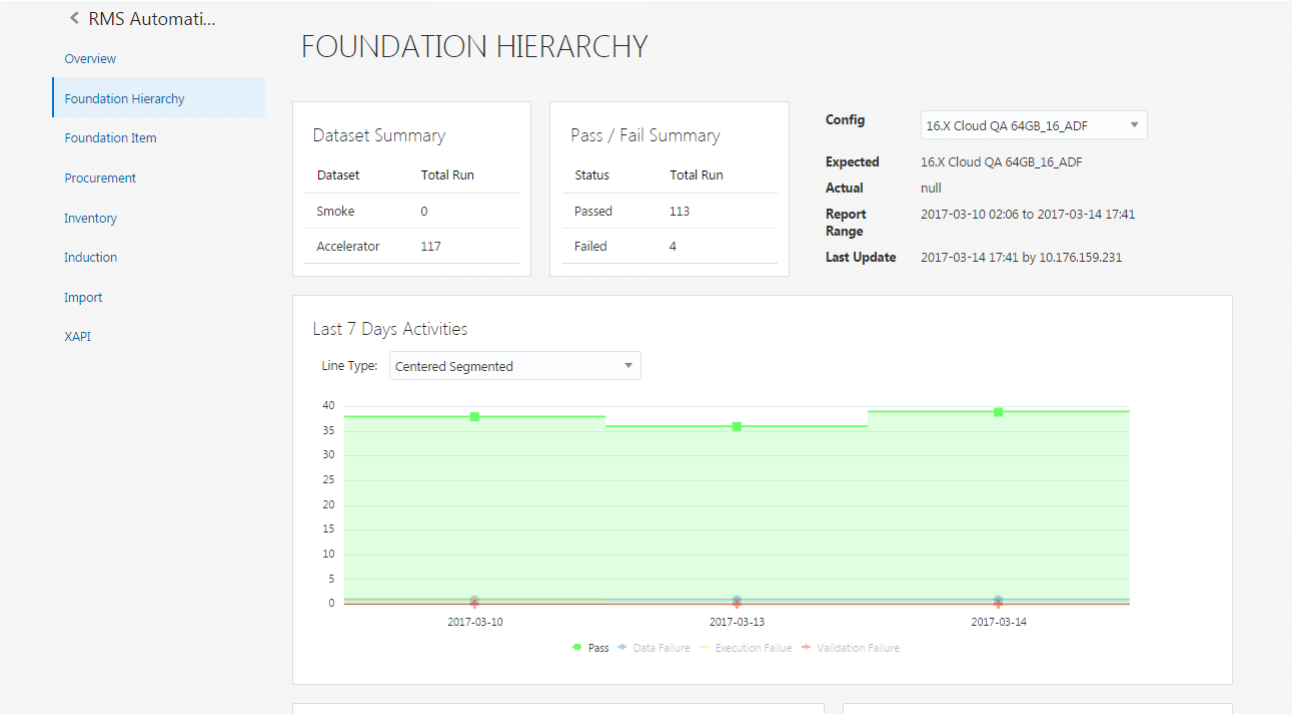

Figure 5.6: Dashboard Cluster First Part

Second part of the clustered page of the dashboard is all about having pass fail info in pie chart form and having a table beside that chart which shows dataset wise information also.

That is followed by a table showing machine, user, dataset, run timing information.

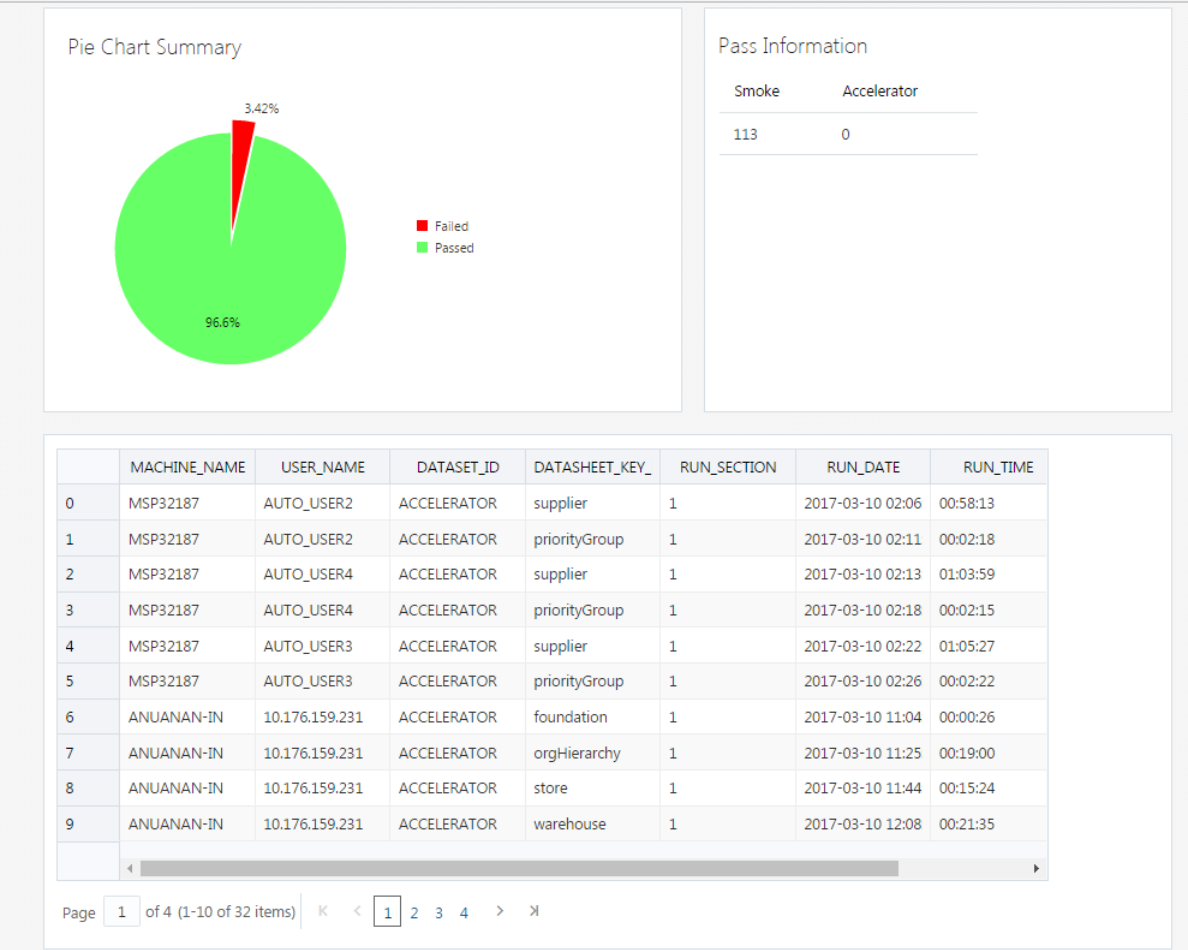

Figure 5.7: Dashboard Cluster Second Part

The last part of the page gives overall run summary that gives pass fail statistics dataset wise with the total run time taken within last week for that configured env

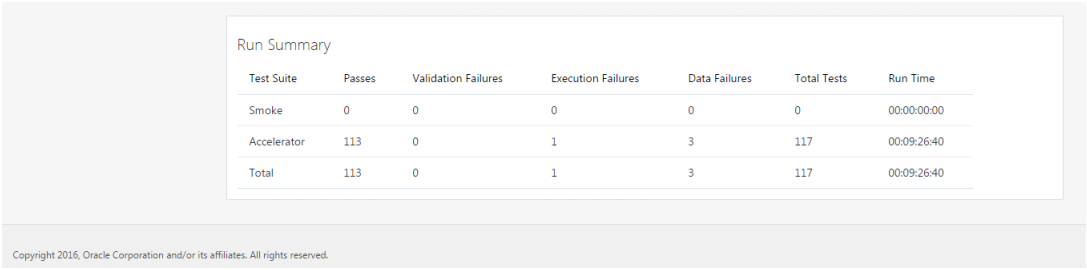

Figure 5.8: Dashboard Cluster Run Summary

Overview Page has almost same UI, just that second section having table beside Pie Chart changes. In overview page the table gives information about all the clusters dataset wise.

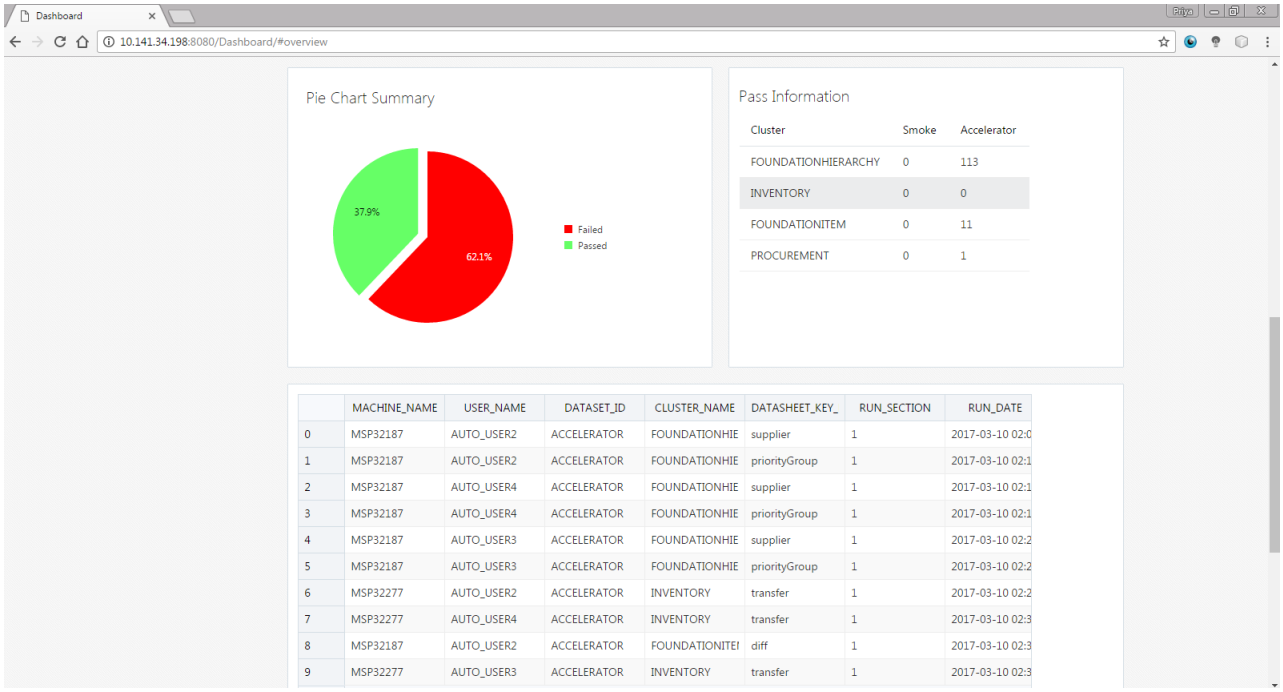

Figure 5.9: Dashboard Overview

5.4 Launcher

5.4.1 Configuring the Run

As we can see in the screenshots, launcher has all possible dependable options to setup the configurations. The configuration starts with the branch path where our staging branch has been located in the device. Giving proper path is must as that only can enable us to access the input files for run.

After that comes the Product details as my team works on multiple products, we can choose the product from here. Then comes the Script Action Entity. Each entity means calling up one module just like deal. Then comes the Script Action Support which helps in filtering out few input entities from the given script action.

Next section talks about the Datahsheet details as thats the folder structure that is being followed by us for now. It keeps on varying as per the need. Dataset ID defines the dataset we'd like to run.

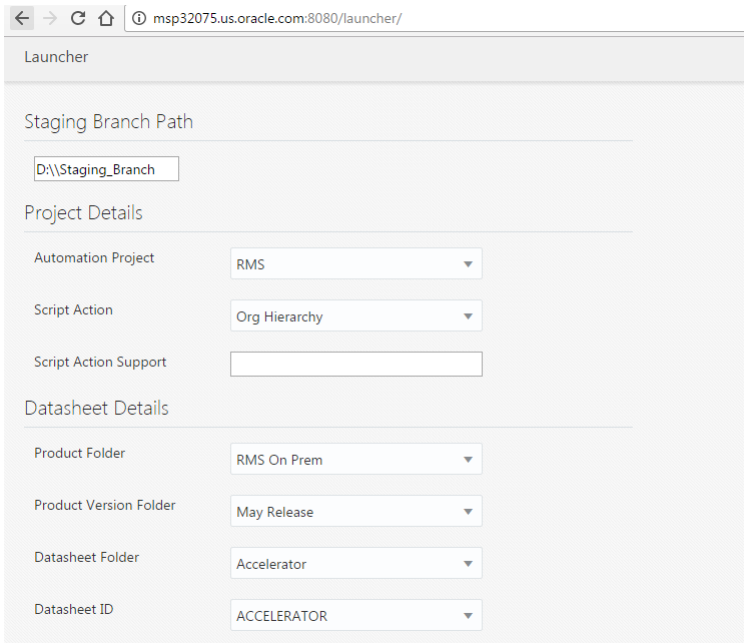

Figure 5.10: Launcher Configuration

Then comes the Environment details. Expected environment is the we want to test. Actual environment is the stable environment with which we'd want to compare our product stability.

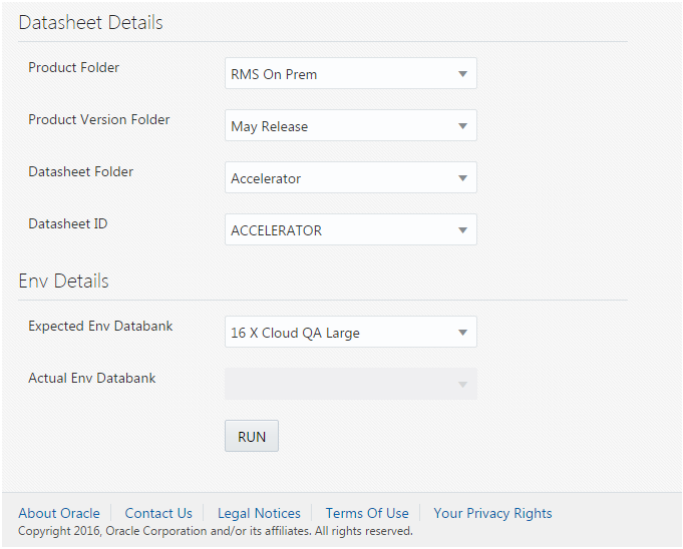

Figure 5.11: Launcher Configuration - 2

After setting up the configurations, click on Run helps us download Launcher.bat file.

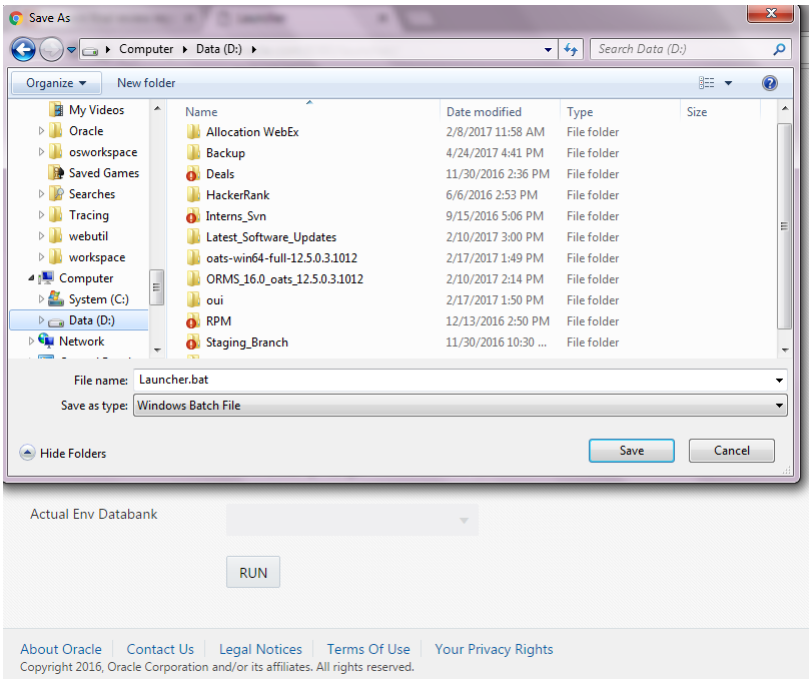

Figure 5.12: Saving Configuration for future run

5.4.2 Starting the Run

Launcher.bat has all the configurations saved in the file. Now whenever we need to run that configuration, we just need to run that file and we're done. It can be used multiple times.Benefit of having this file over traditional method is it can be used multiple times. We can have as many launcher files as we need. All configurations can be used as many times as needed. Traditional method used to overwrite the configurations each time so it was not reusable if its overwritten once.

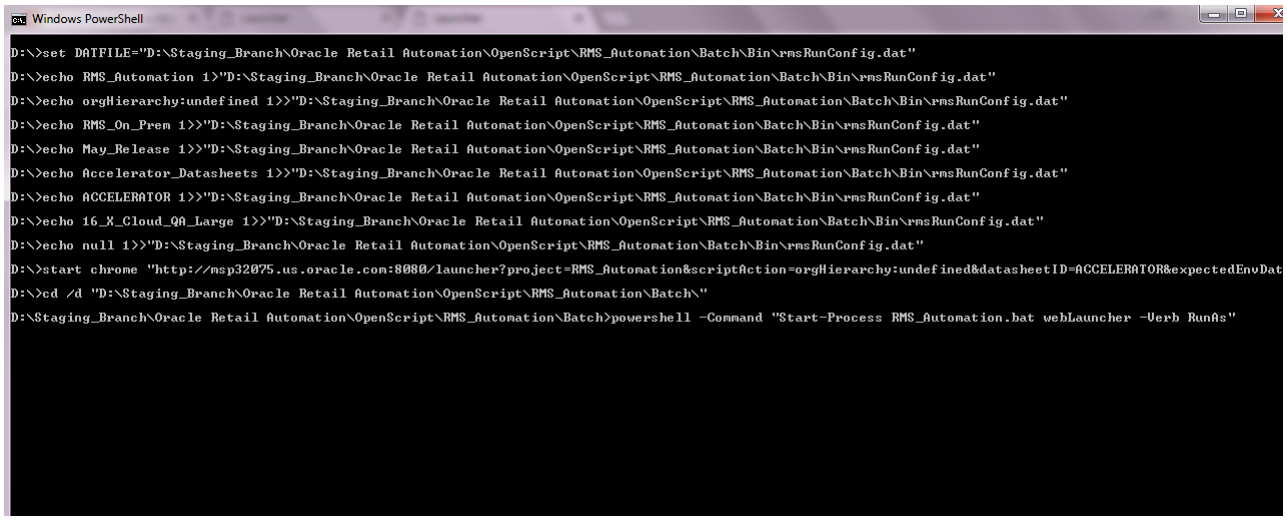

Figure 5.13: Actual Run Started

5.4.3 Analyzing the Run

As we can see in the screenshot, the run which has been configured to run has to do lot of process like, purge files older than 14 days, running all the configured entities, saving data of that run into a test file and generating html result files, logging into server to upload result files, screenshots to server.

All these steps would consume some time so putting analysis of each step into consideration to get the accurate time duration that might take in the running the given entity in the configured environment.

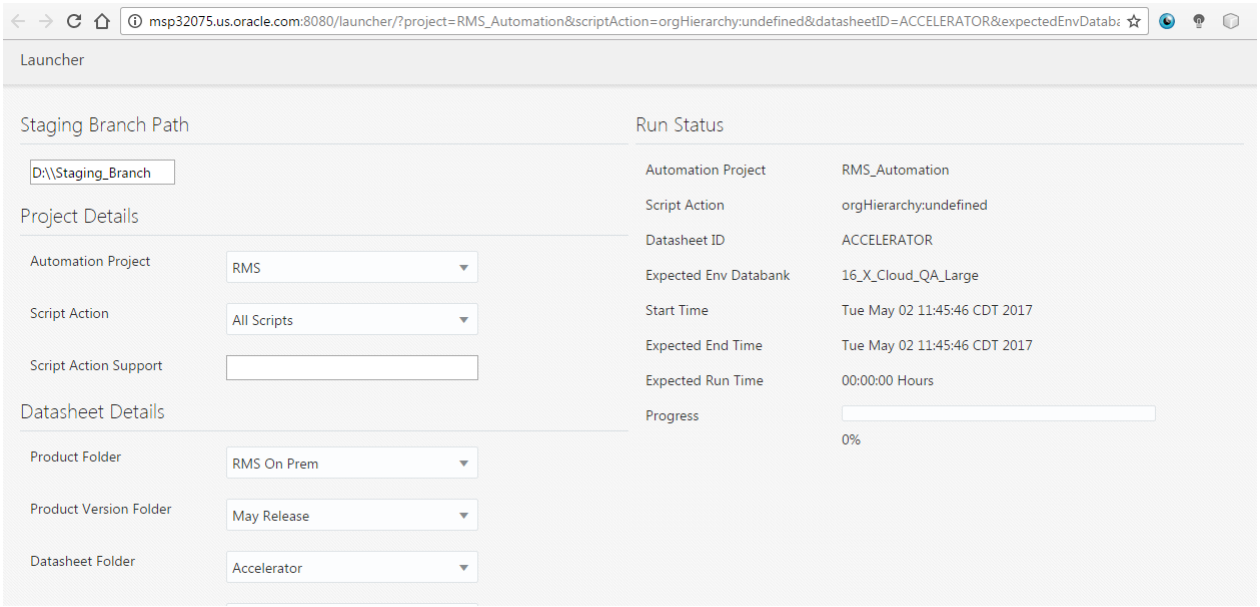

Figure 5.14: Launcher Analysis

Chapter 6

Conclusion

Oracle has given me opportunity to learn something out of the box so far. I had no experience in Quality Assurance field earlier, so knowing about this field itself became nice for me. I first of all got an opportunity to work with RMS product for which I had to take self training to understand how Retail industry works. Knowing about automation is not enough to work on RMS. Since RMS is at the center of all the products, working with RMS itself came up with lot of Retail Knowledge. My journey didnt stop there, as I got an opportunity to work on ReSA later, that made me realize how oracle combines all the products, how are they depending on each other and the importance of each. Being part of automation team gave me opportunity not only to know more and more about retail products but also I had got an opportunity to work on Dashboard that helps managers, leaders, analysts in better understanding the stability of the environments. At last working on Launcher made me realize how each entity run is important in the system and how much time it can take to run.

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