





PROJECT REPORT

ON

*VERITAS Entitlement Management System*

FOR

Veritas Technologies LLC

BY

Vivek Khisti

SAVITRIBAI PHULE PUNE UNIVERSITY  
MASTER IN COMPUTER APPLICATION  
MAHARASHTRA EDUCATION SOCIETY'S  
INSTITUTE OF MANAGEMENT AND CAREER COURSES  
(IMCC), PUNE-411038

2016-17



Maharashtra Education Society's  
**INSTITUTE OF MANAGEMENT AND CAREER COURSES (IMCC)**

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Date: 02/6/17

## CERTIFICATE

This is to certify that the Project Report entitled "*VERITAS Entitlement Management System*" is prepared by *Vivek Khisti* a student of *M.C.A.* Course for the Academic Year 2016-17 at M.E.Society's Institute of Management & Career Courses (IMCC), Pune - 411038. *M.C.A.* Course is affiliated to Savitribai Phule Pune University.

To the best of our knowledge, this is original study done by the said student and important sources used by him/her have been duly acknowledged in this report.

The report is submitted in partial fulfillment of *M.C.A.* Course for the Academic Year 2016-17 as per the rules & prescribed guidelines of Savitribai Phule Pune University.

*Dr. Santosh Deshpande*  
HOD, Computer Dept. IMCC

*Dr. Vikas Inamdar*  
Director, IMCC

*External Examiner*

*Internal Examiner*

# VERITAS™

March 29, 2017

Statement of Employment for Vivek Khisti

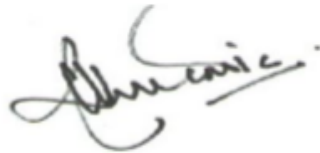
To Whom It May Concern:

This letter is to confirm that Vivek Khisti is a Full time employee of Veritas Software Technologies India Pvt Ltd hired on January 18, 2017 and is currently a Intern - Master's Level. The employee's length of service may include time with acquired companies.

Please note, this statement is issued on the employee's request.

In accordance with our normal practice, this statement is given without acceptance of any liability on the part of Veritas Software Technologies India Pvt Ltd. It is not our practice to comment further in employment statements.

Sincerely,



Leucadia Milly Sandeep  
India Human Resources  
Veritas Software Technologies India Private Limited

## CERTIFICATE

This is to certify that **Vivek Khisti** has completed the project work entitled "*VERITAS Entitlement Management System*" under my guidance. The report is submitted in partial fulfillment of M.C.A. Course for the Academic Year 2016-2017 as per the rules & prescribed guidelines of Savitribai Phule Pune University.

His/Her work is found to be satisfactory and complete in all respects.

**Venugopal Narsingoju**  
(Internal Project Guide)

## **Acknowledgment**

I present with pride and pleasure the project report on “Veritas Entitlement Management System” aimed to the supplement attachment has required under the regulation of the Savitribai Phule Pune University. I would like to wish sincere gratitude to Mr’s. Smita Vagyani, VERITAS LLC India Private Limited who have helped in making this project. Words are inadequate to express the feelings of infinite gratitude’s to him, but for my gratification I have this acknowledgment. I am highly indebted to the project guide Prof. Venugopal .S.Narsingoju, Assistant Professor, I.M.C.C. And Mr. Abhijit Naik for their guidance and constant inspection in each and every stage of project without which project work would not have taken this shape and form. I wish to offer most sincere thanks to Dr. Santosh Deshpande, HOD, Computer Department, IMCC for encouraging and providing with all the facilities. I wish to offer sincere thanks to Dr. Manasi Bhate, TPH for providing the necessary co-operation. Particular thanks to Dr. V. H. Inamdar, Director I.M.C.C. who allotted us with enough time for the project. Finally, I

am extremely thankful to teaching and non-teaching staff for their  
kind and whole co-operation.

Vivek Khisti



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**CHAPTER 1**  
**INTRODUCTION**

## **1.1 Company Profile**



**Veritas Technologies LLC** develops and delivers backup and recovery, business continuity, information governance, and storage management solutions worldwide. The company provides backup and recovery products comprising system recovery solutions for protecting desktops, laptops, servers, and virtual machines; and NetBackup appliances that provide backup and recovery for data centres, remote offices, and virtual environments. Its business continuity products include Info Scale Enterprise, which provides business continuity and software-defined storage for critical services across data centres; Backup Exec, a backup and recovery solution for mid-sized organizations; and Disaster Recovery Orchestrator that offers disaster recovery for business applications.

The company's information governance products include Data Insight, a file analysis solution that provides the tracking and reporting necessary to deliver organizational accountability for file usage and security. It also provides education services; business critical services; consulting services; managed services that include monitoring, management, and support of backup and archiving environments; and appliance installation and custom configuration services. It offers unstructured data growth, multi-vendor hybrid cloud, healthcare, and government solutions. Its software and hardware products enable Fortune 500 companies to protect, identify, and manage data within environments ranging from traditional data centers to private, public, and hybrid clouds. The company was incorporated in 2015 and is based in Mountain View, California.

The exponential growth of data and the resources needed to manage it is one of the most pressing issues facing business today. And it's not just the amount of data. It's where it lives and how it travels between private clouds, public clouds and back to on premises.

In these increasingly complex IT environments, it's important to focus on what's constant: the data.

Every one of our information management solutions – from business continuity to back up and recovery to software defined storage and information governance – is designed around the principle that information is more important than infrastructure. Veritas has the privilege to help the world's organizations - including 86% of the global Fortune 500 - collect, protect, analyze and optimize their data, even in the most demanding environments.

**Chief Executive Officer:** Bill Coleman is the Chief Executive Officer at Veritas. Coleman is an industry veteran who has spent 25 years running prominent Silicon Valley companies including his years as the founder/CEO of BEA Systems.

## **1.2 Existing System and Need of the System**

Current challenges faced by organization with existing system

- The Current system is third party System.
- The current system include large amount of costs which is not profitable to the organization.
- Incorporating new change in the system is difficult and includes greater costs
- **Business Requirement**

In order to overcome limitations in existing system, there arises a need to develop a new system. The desired system should be able to overcome the flaws of the existing system and should be able to provide additional features.

The need for the system arises due to some problems in the current system or if the user is unable to cope up with the current system. The user might not be comfortable with the current system due to which the need for new system arises.

- Create an in-house system that can manage the licensing process.
- Maintain and improve the system within the organization itself.
- Create a system which can seamlessly integrate with others systems like ERP and data sources.

### **1.3 Scope of Work**

- The goal of the VEMS is to provide the users the ability to generate licenses for the products and to download product binaries.
- The overall goal of Licensing Portal is to provide a seamless integration between MyVeritas.com and End User Portal.
- The Solution will include a combined user login, user creation, and use account management module for the licensing applications.
- The solution will have an impact on the install base. Service contract as they are all affected by the customer registration/product activation process.
- All the processes i.e. Create Entitlement, Process Order ,Different Version of VERITAS product binaries download, manage enterprise contracts will be done through the portal.
- License Generation Should be done automatically through SIG and LUNA key generation server



## **1.4 Operating Environment –**

### **Hardware and Software**

#### **✓ Client Side & Server Side**

##### **• HARDWARE REQUIREMENTS**

- 2.3 Core I3 3<sup>rd</sup> Gen or above
- 2GB RAM

##### **• SOFTWARE REQUIREMENTS**

- Windows/Linux/Mac OS
- Web Browser (IE/Chrome/Firefox/Safari)
- Good Internet Connection

#### **✓ Developer Side**

##### **• HARDWARE REQUIREMENTS**

- Core I5 Gen or above
- 4GB DDR 3 RAM

##### **• SOFTWARE REQUIREMENTS**

- Windows/Linux/Mac OS
- Web Browser (IE/Chrome/Firefox/Safari)
- Good Internet Connection
- Eclipse (latest version is better)
- Visual Studio Code
- Tomcat (latest version)

- Java 1.6 or above
- Framework used: Spring Boot, Maven

## **1.5 Description of Technology used**

### **❖ Angular 2**

AngularJS is by far the most popular JavaScript framework available today for creating web applications. And now Angular 2 and Typescript are bringing true object oriented web development to the mainstream, in a syntax that is strikingly close to Java 8.

Angular 2 is not an MVC framework, but rather a component-based framework. In Angular 2 an application is a tree of loosely coupled components.

### **Cross Platform**

#### **Progressive web apps**

Use modern web platform capabilities to deliver app-like experiences. High performance, offline, and zero-step installation.

#### **Native**

Build native mobile apps with strategies from Ionic Framework, Native Script, and React Native.

#### **Desktop**

Create desktop-installed apps across Mac, Windows, and Linux using the same Angular methods you've learned for the web plus the ability to access native OS APIs.

## **Speed and Performance**

### **Code generation**

Angular turns your templates into code that's highly optimized for today's JavaScript virtual machines, giving you all the benefits of hand-written code with the productivity of a framework.

### **Universal**

Serve the first view of your application on node.js, .NET, PHP, and other servers for near-instant rendering in just HTML and CSS. Also paves the way for sites that optimize for SEO.

### **Code splitting**

Angular apps load quickly with the new Component Router, which delivers automatic code-splitting so users only load code required to render the view they request.

### **Productivity**

#### **Templates**

Quickly create UI views with simple and powerful template syntax.

#### **Angular CLI**

Command line tools: start building fast, add components and tests, and then instantly deploy.

#### **IDEs**

Get intelligent code completion, instant errors, and other feedback in popular editors and IDEs.

## **Full Development Story**

### **Testing**

With Karma for unit tests, you can know if you've broken things every time you save. And Protractor makes your scenario tests run faster and in a stable manner.

### **Animation**

Create high-performance, complex choreographies and animation timelines with very little code through Angular's intuitive API.

### **Accessibility**

Create accessible applications with ARIA-enabled components, developer guides, and built-in a11y test infrastructure.

## **❖ SPRINGBOOT**

Spring Boot makes it easy to create stand-alone, production-grade Spring based Applications that you can "just run". We take an opinionated view of the spring platform and third-party libraries so you can get started with minimum fuss. Most Spring Boot applications need very little Spring configuration.

### **Features**

- Create stand-alone Spring applications
- Embed Tomcat, Jetty or Undertow directly (no need to deploy WAR files)
- Provide opinionated 'starter' POMs to simplify your Maven configuration
- Automatically configure Spring whenever possible

- Provide production-ready features such as metrics, health checks and externalized configuration
- Absolutely **no code generation** and **no requirement for XML** configuration

## • ORACLE

Oracle database (Oracle DB) is a relational database management system (RDBMS) from the Oracle Corporation. Originally developed in 1977 by Lawrence Ellison and other developers, Oracle DB is one of the most trusted and widely-used relational database engines.

The system is built around a relational database framework in which data objects may be directly accessed by users (or an application front end) through structured query language (SQL). Oracle is a fully scalable relational database architecture and is often used by global enterprises, which manage and process data across wide and local area networks. The Oracle database has its own network component to allow communications across networks. Oracle DB is also known as Oracle RDBMS and, sometimes, just Oracle.

Oracle DB runs on most major platforms, including Windows, UNIX, Linux and Mac OS. Different software versions are available, based on requirements and budget. Oracle DB editions are hierarchically broken down as follows:

- Enterprise Edition: Offers all features, including superior performance and security, and is the most robust
- Standard Edition: Contains base functionality for users that do not require Enterprise Edition's robust package
- Express Edition (XE): The lightweight, free and limited Windows and Linux edition
- Oracle Lite: For mobile device.

**CHAPTER 2**  
**PROPOSED SYSTEM**

## **2.1 Proposed System**

- The overall goal of Licensing Portal is to provide a seamless integration between MyVeritas.com and End User Portal.
- The Solution will include a combined user login, user creation, and use account management module for the licensing applications.
- The solution will have an impact on the install base. Service contract as they are all affected by the customer registration/product activation process.
- All the processes i.e. Create Entitlement, Process Order ,Different Version of VERITAS product binaries download, manage enterprise contracts will be done through the portal.
- License Generation Should be done automatically through SIG and LUNA key generation server



## **2.2 Objective of System**

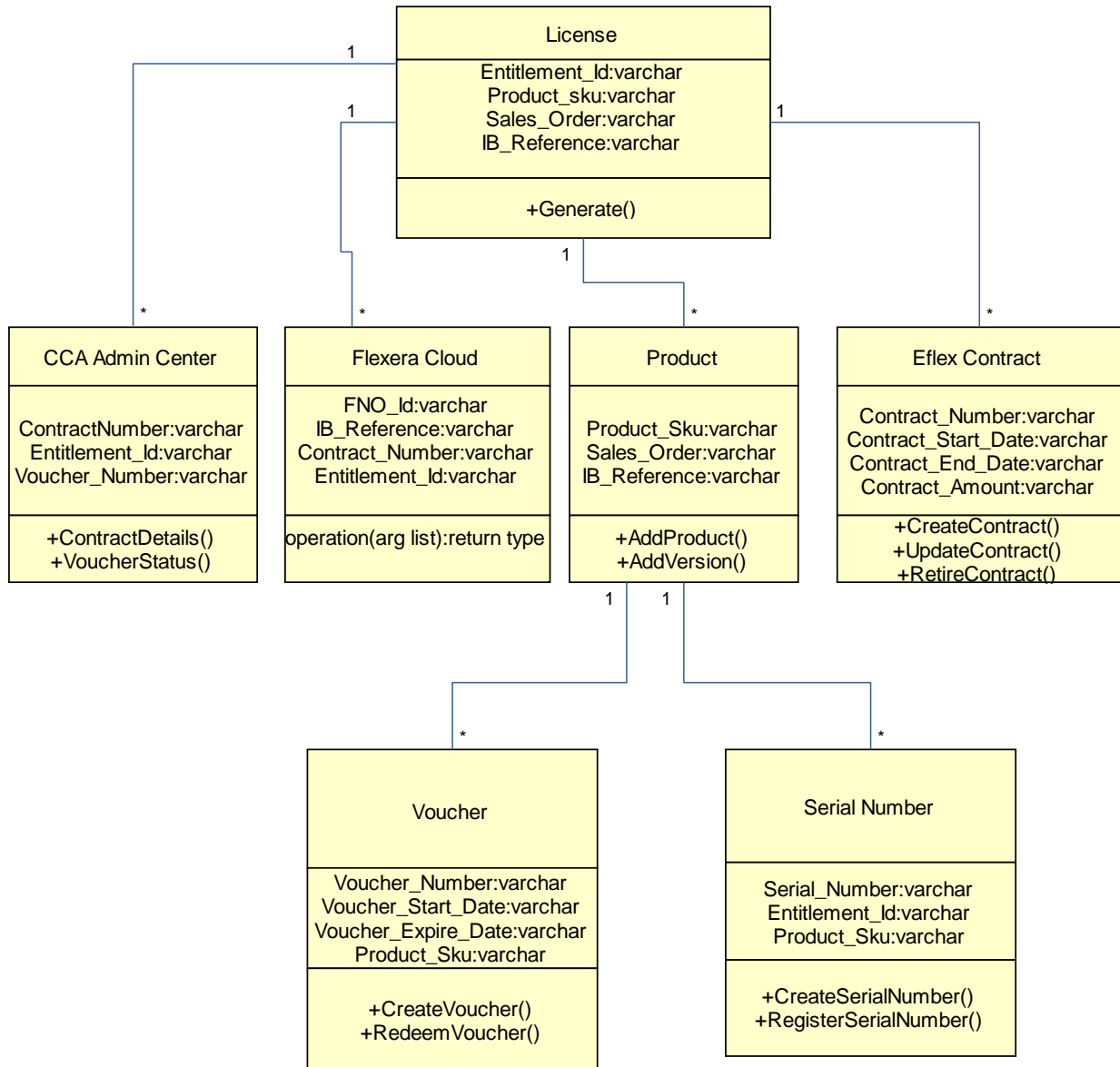
- Ability to integrate with Single Sign on, My VERITAS Portal.
- Ability to support SMB retail packs via an anonymous registration to capture entitlement data for sales opportunity and deliver license keys if necessary.
- Customer has purchased a VERITAS product, Customer should be able to login from MyVeritas.com and click “Licensing” tab, customer should manage the entitlements and download product in portal.
- Customer has purchased the product from retailer, Customer should be able to register SMB Serial Number via an anonymous registration to capture entitlement data for sales opportunity and deliver license keys if necessary.
- The solution will include a combined login, user creation, and user account management module for the licensing application.

## **2.3 User Requirements**

- User should be able to login to the system using the credentials provided to him.
- User should be able to generate the license keys for the products.
- User should be able to download the software products for which he has generated licenses.
- User should be able to create and view different entitlements for the product.
- User should be able to view the contracts.
- User should be able to view the information regarding contract amount and start and end date of the license and quantity of products.
- User must be able to search on the basis of various parameters.

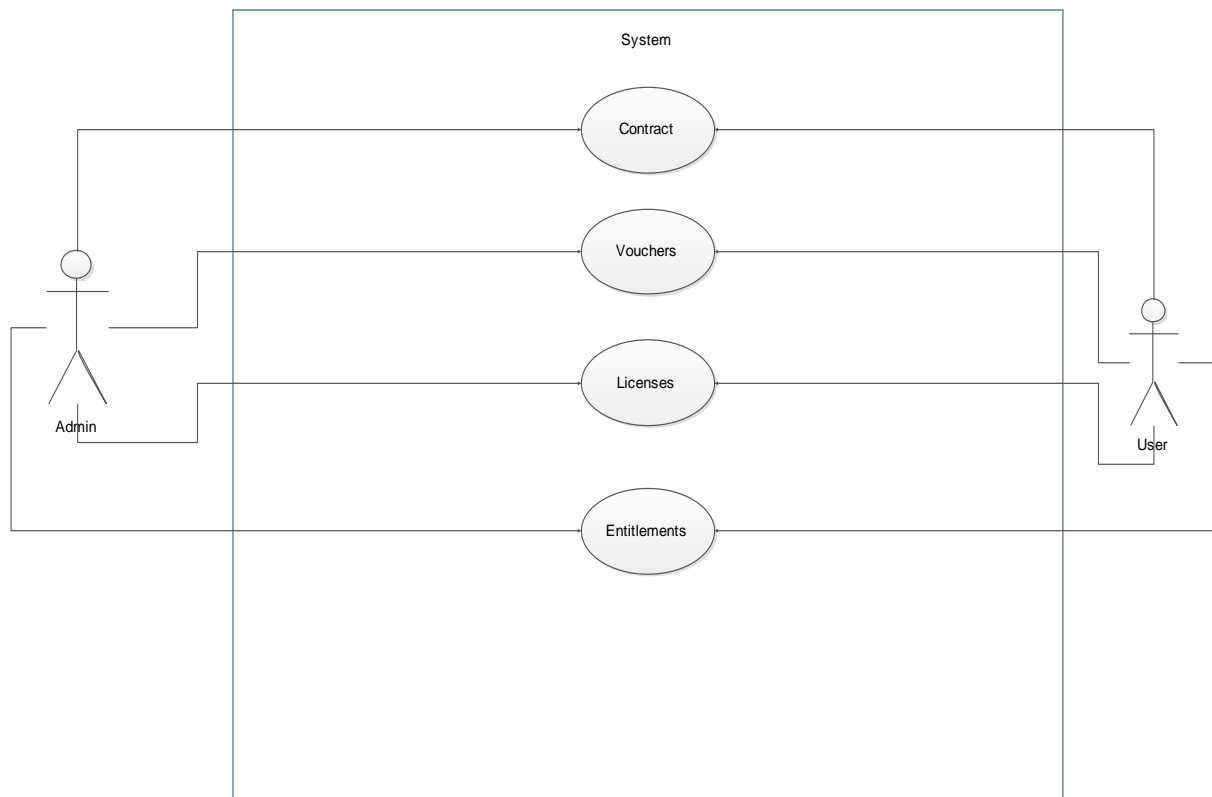
**CHAPTER 3**  
**ANALYSIS AND DESIGN**

### 3.1 Class Diagram

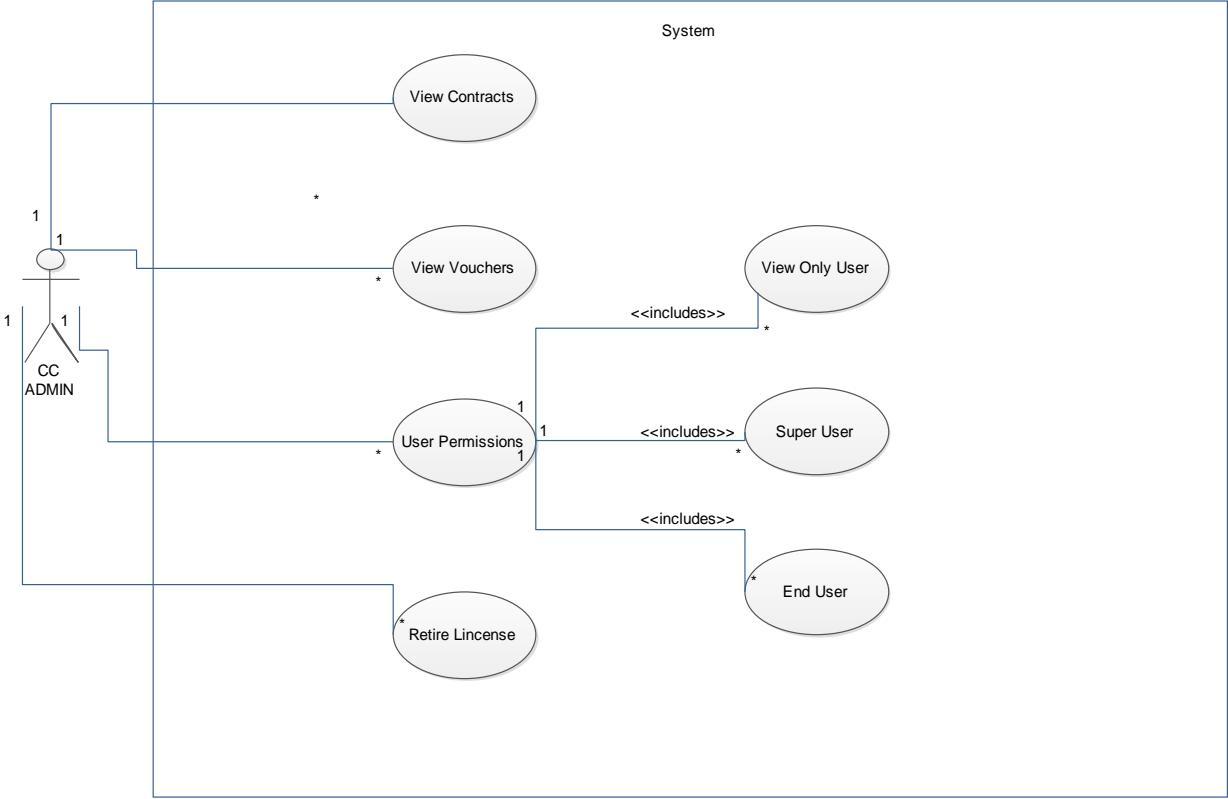


## 3.2 Use Case Diagrams

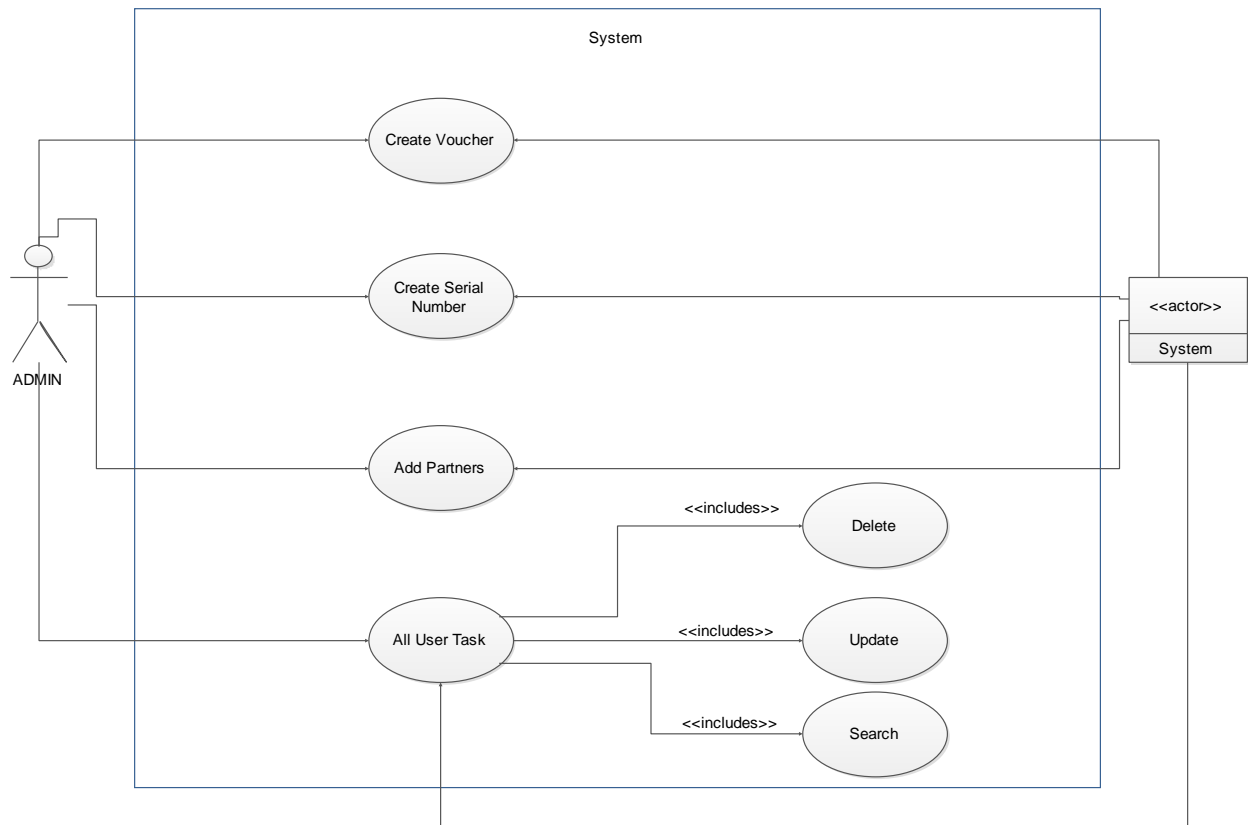
### System Use Case



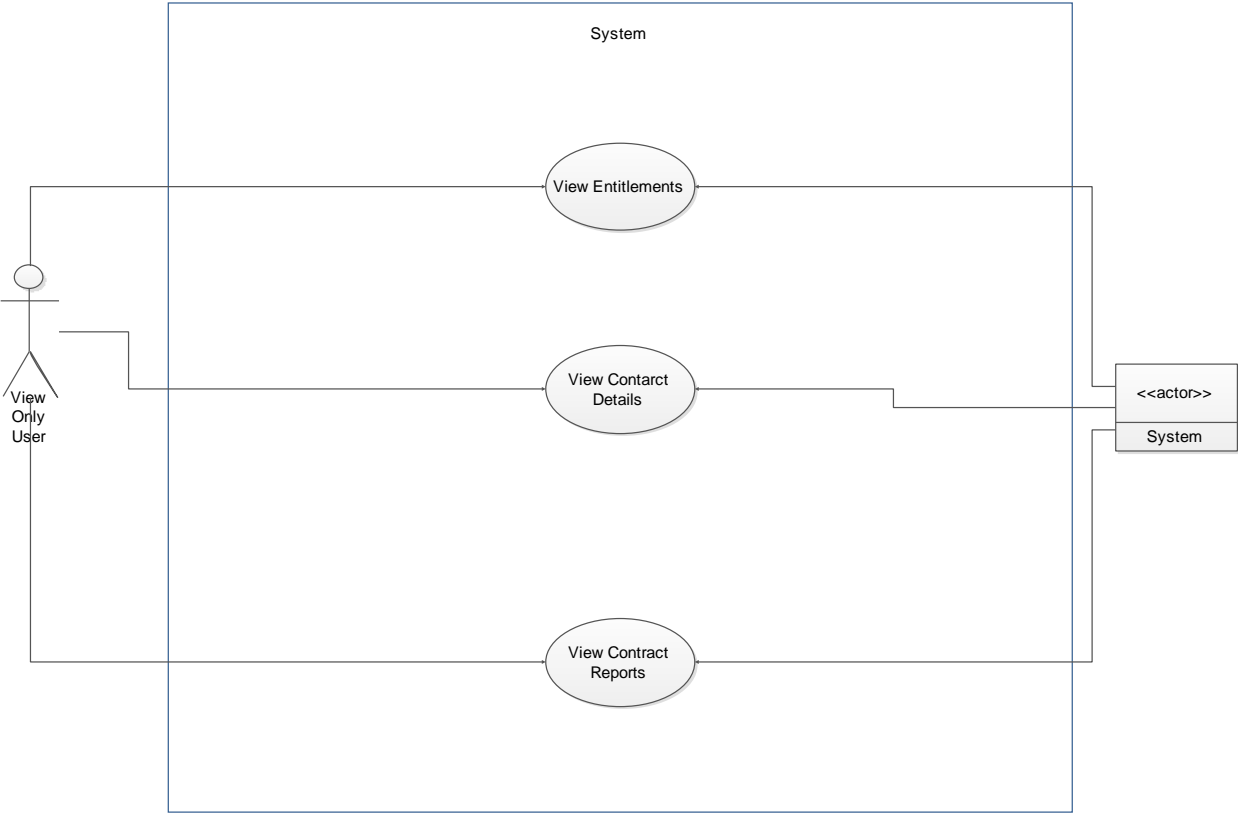
**CCADMIN USECASE**



## ADMIN USECASE

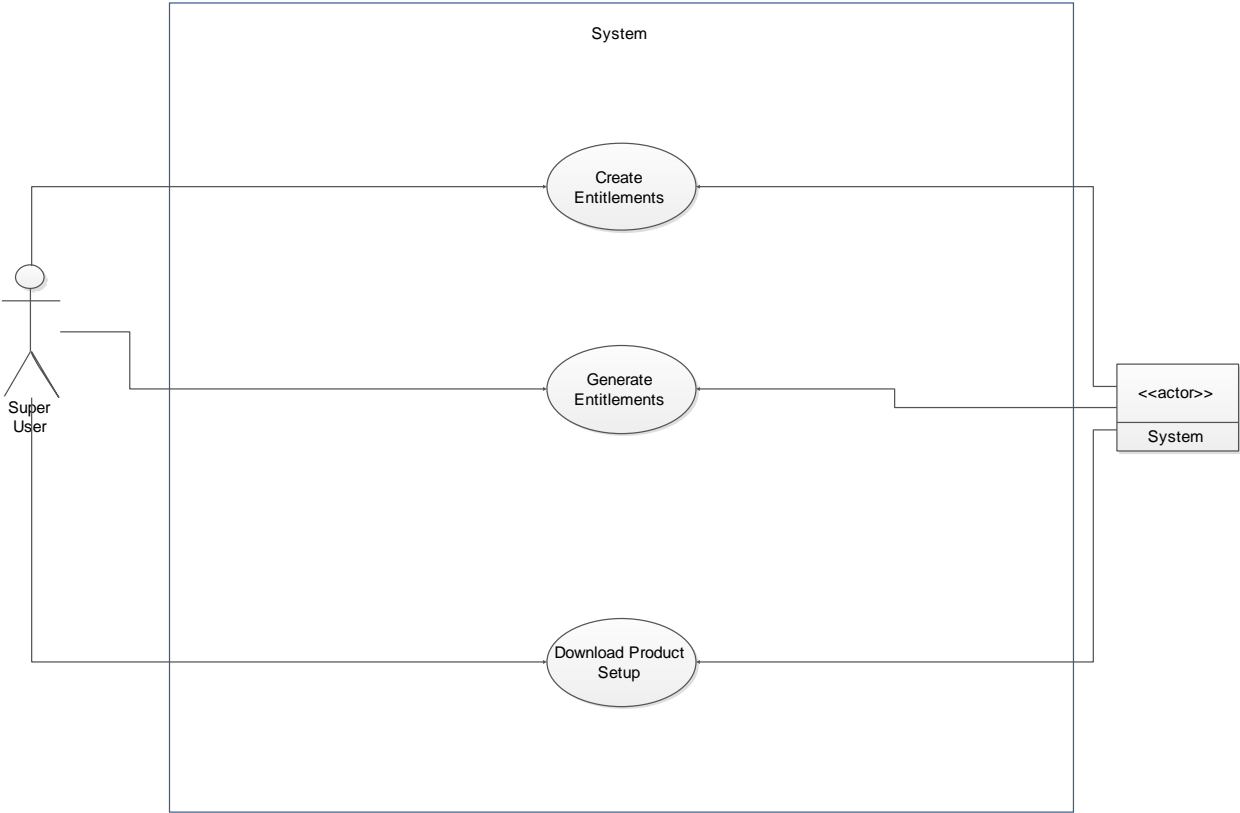


**View Only User USECASE**

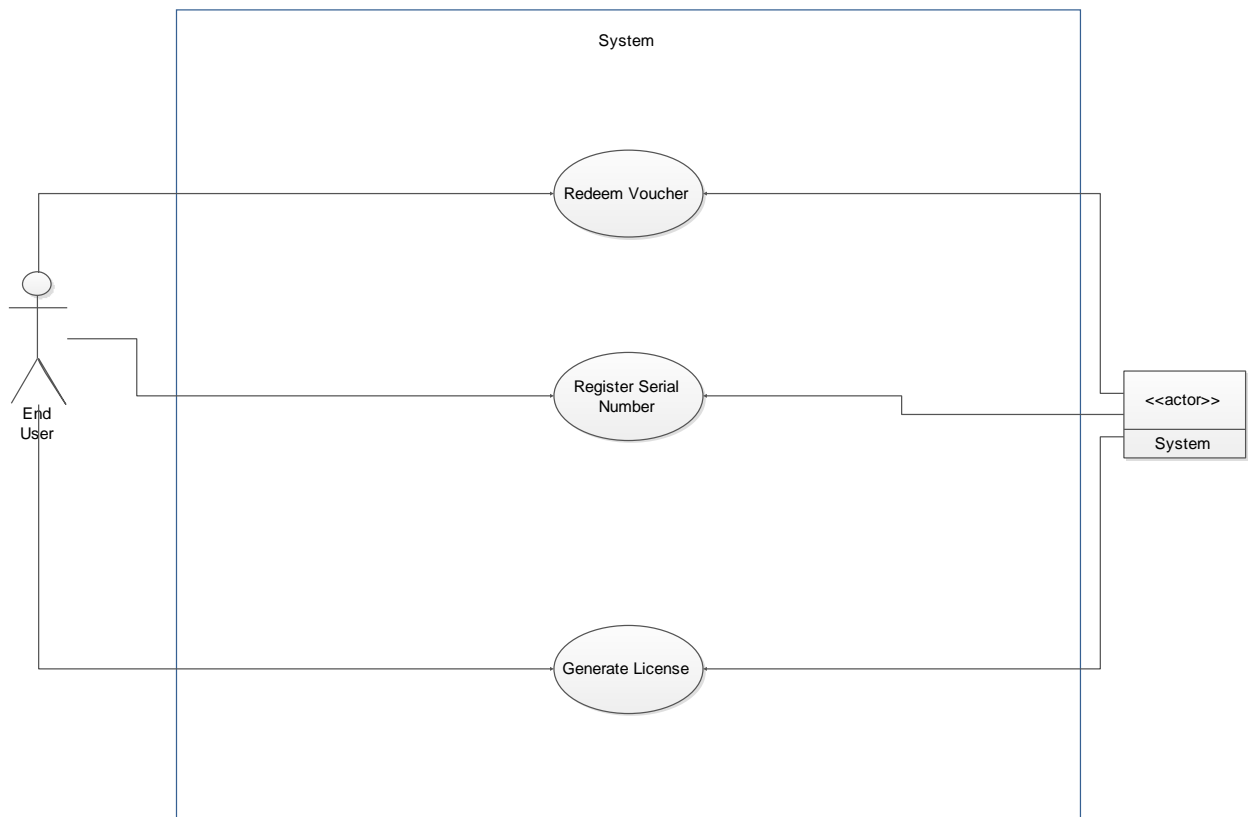




**Super User USECASE**



## End User USECASE

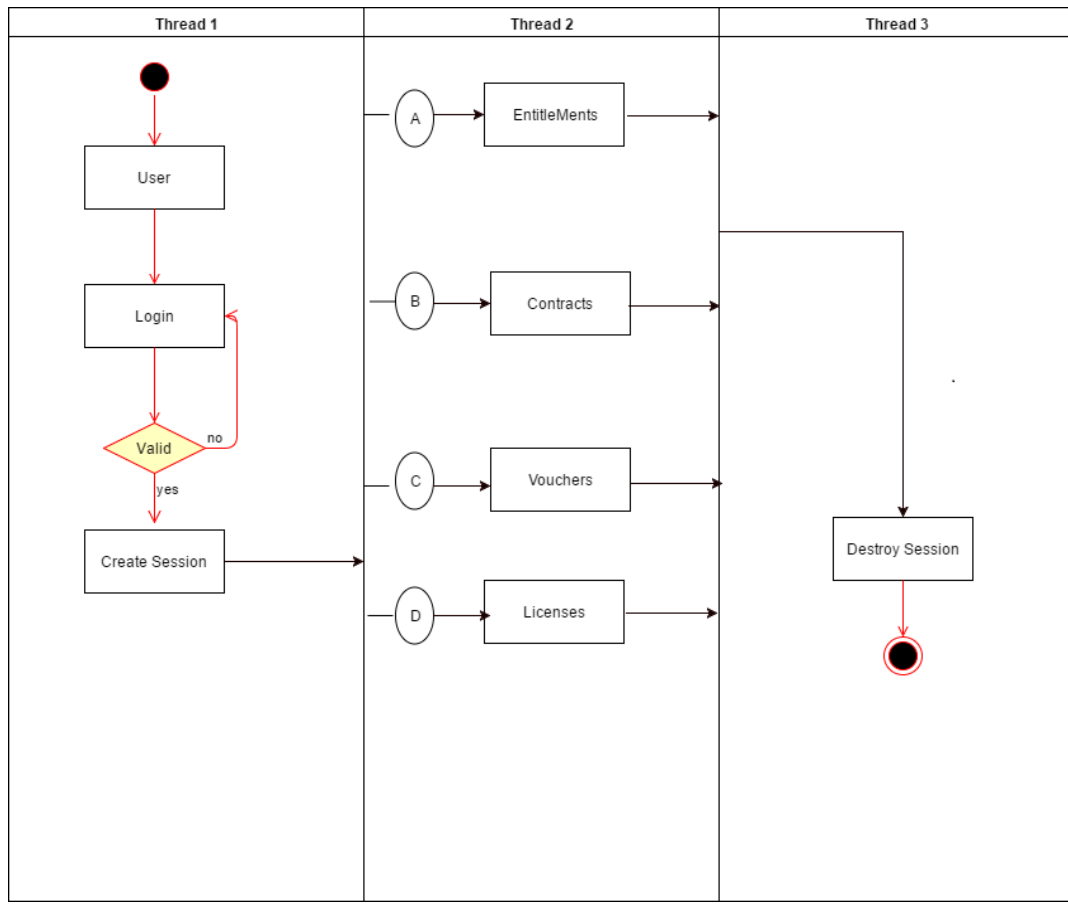


## Sales Person USECASE

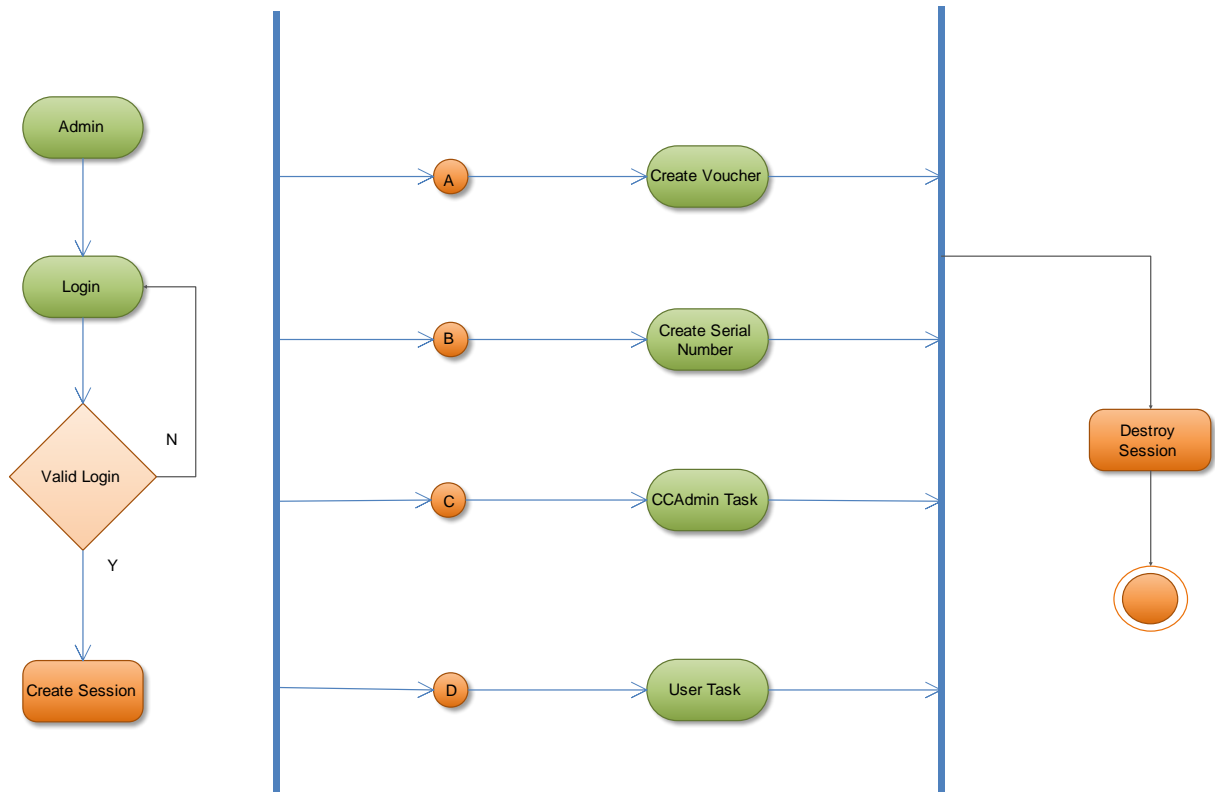


### 3.3 Activity Diagrams

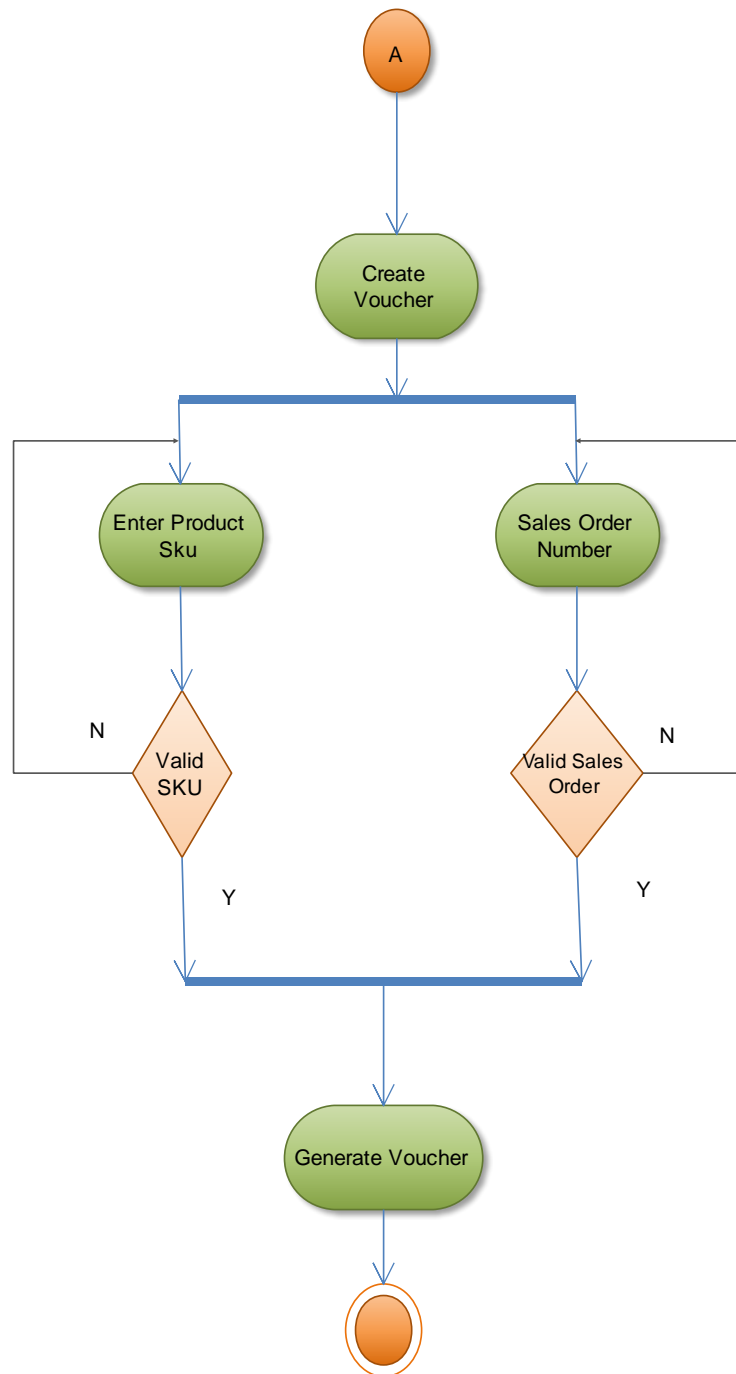
#### System Activity



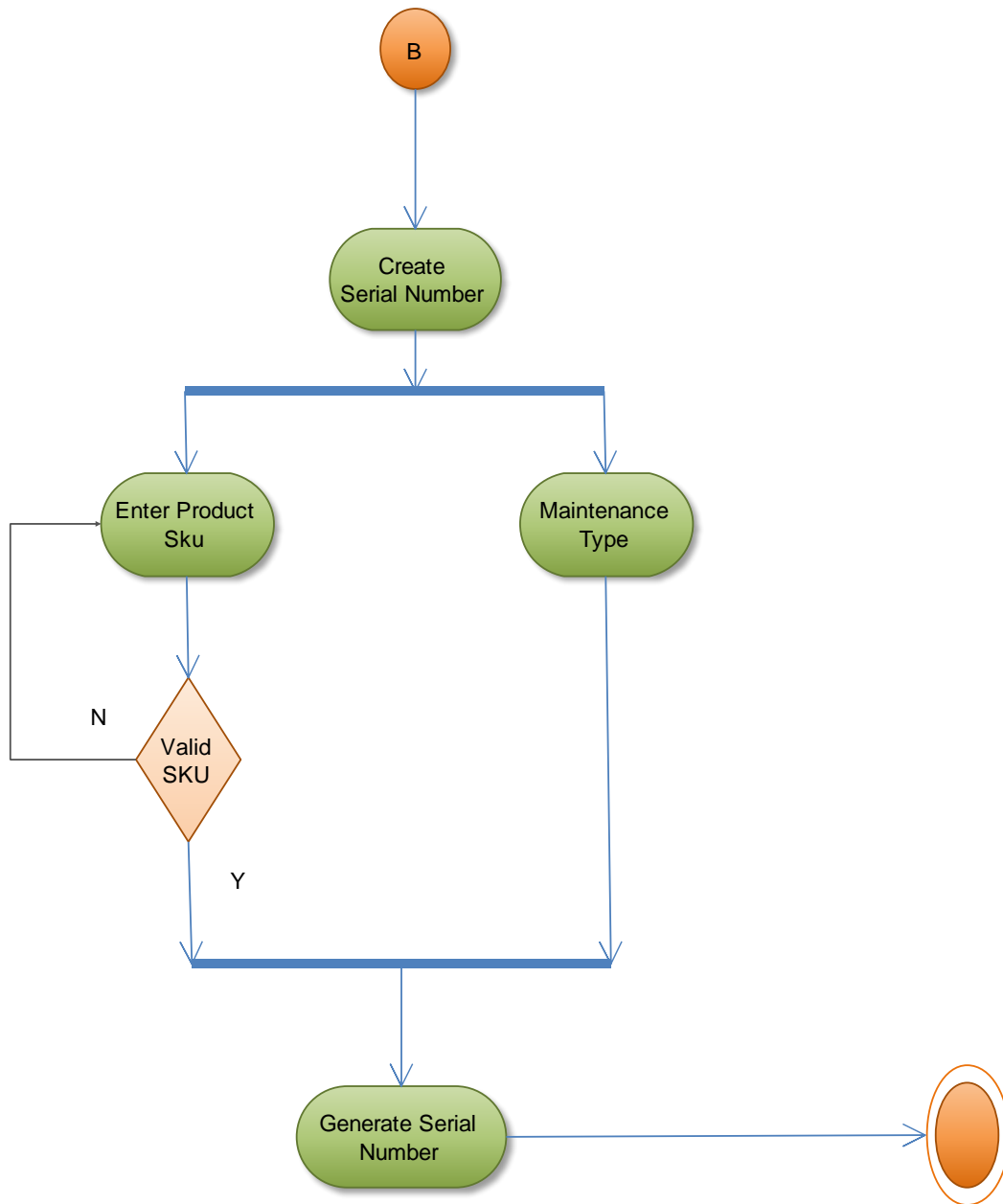
## Admin Activity Diagram



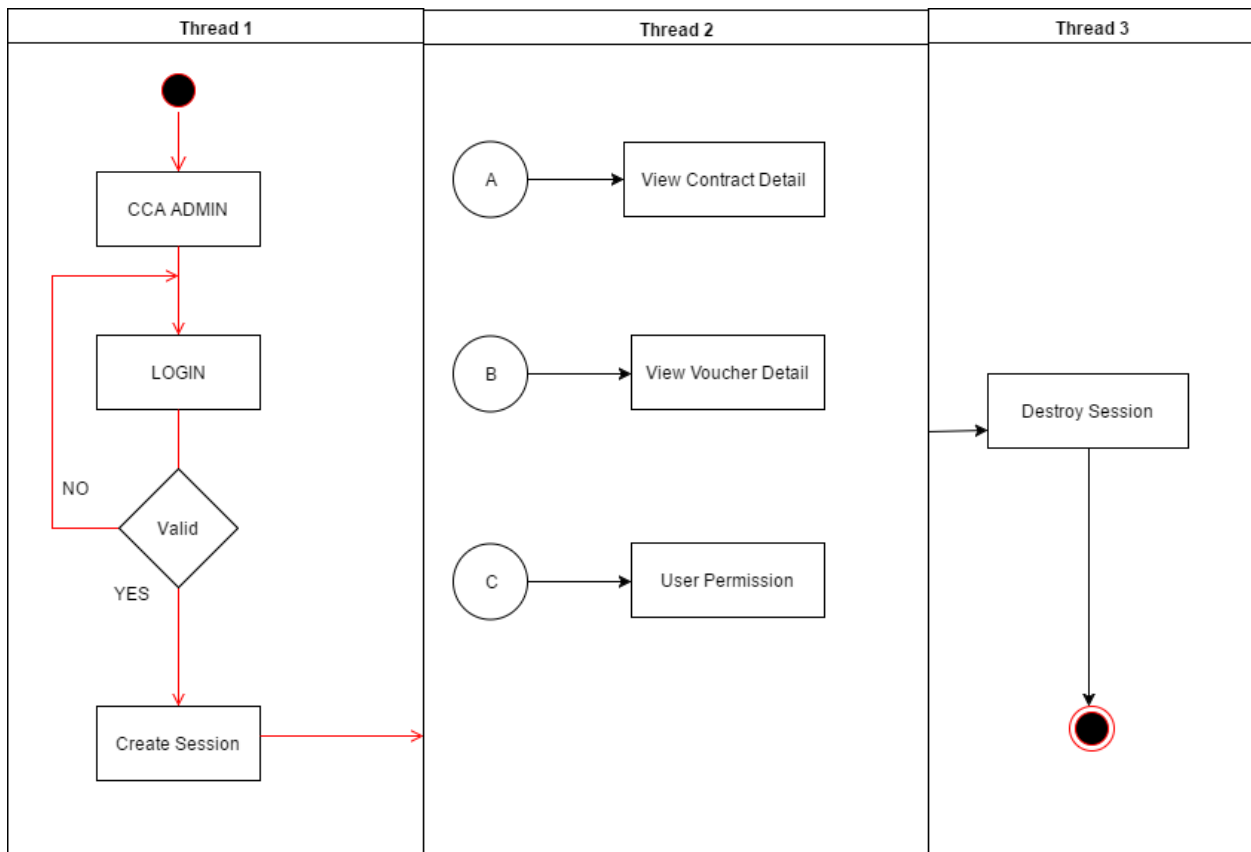
Admin Create Voucher  
Activity



## Create Serial Number

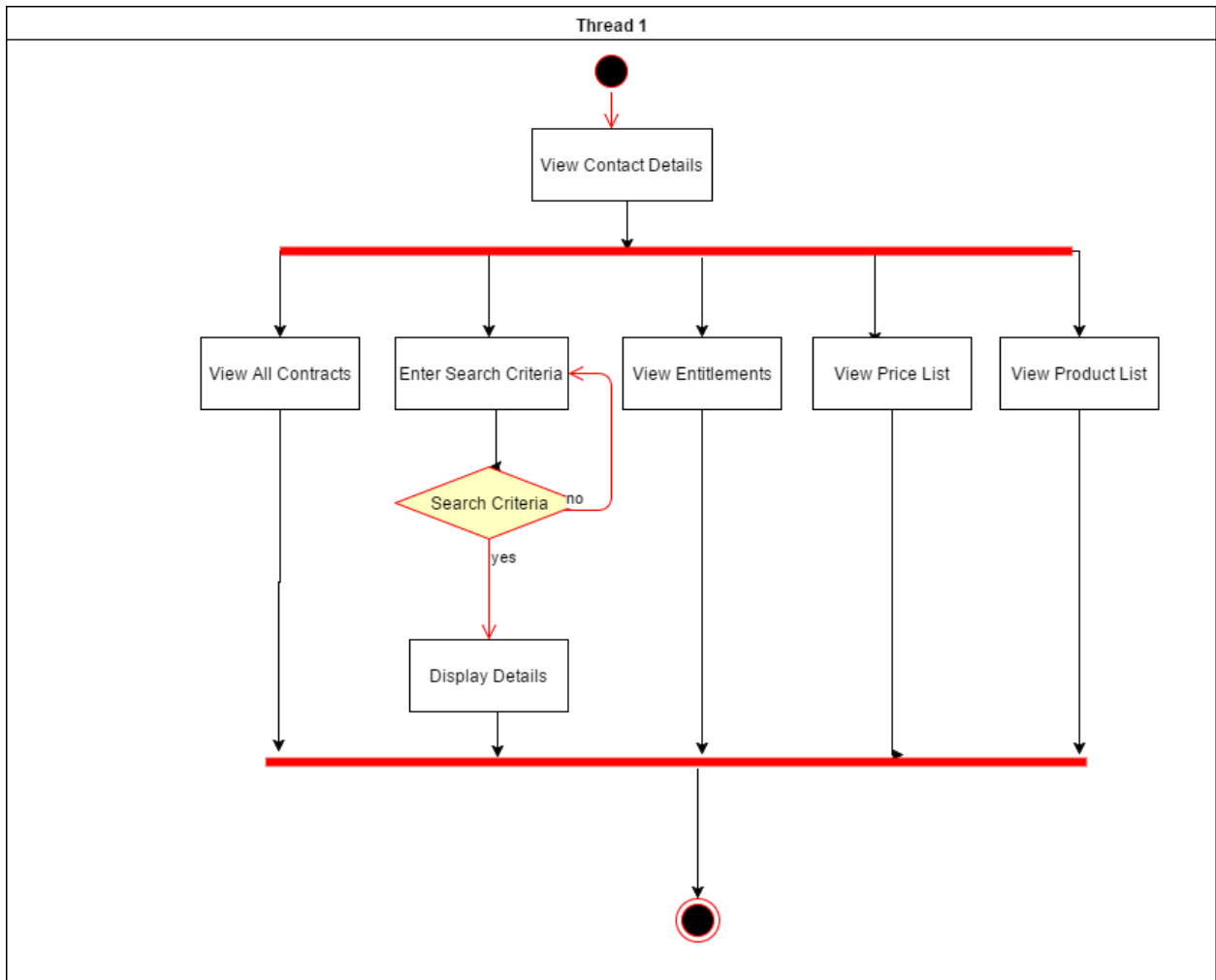


## CCADMIN Activity

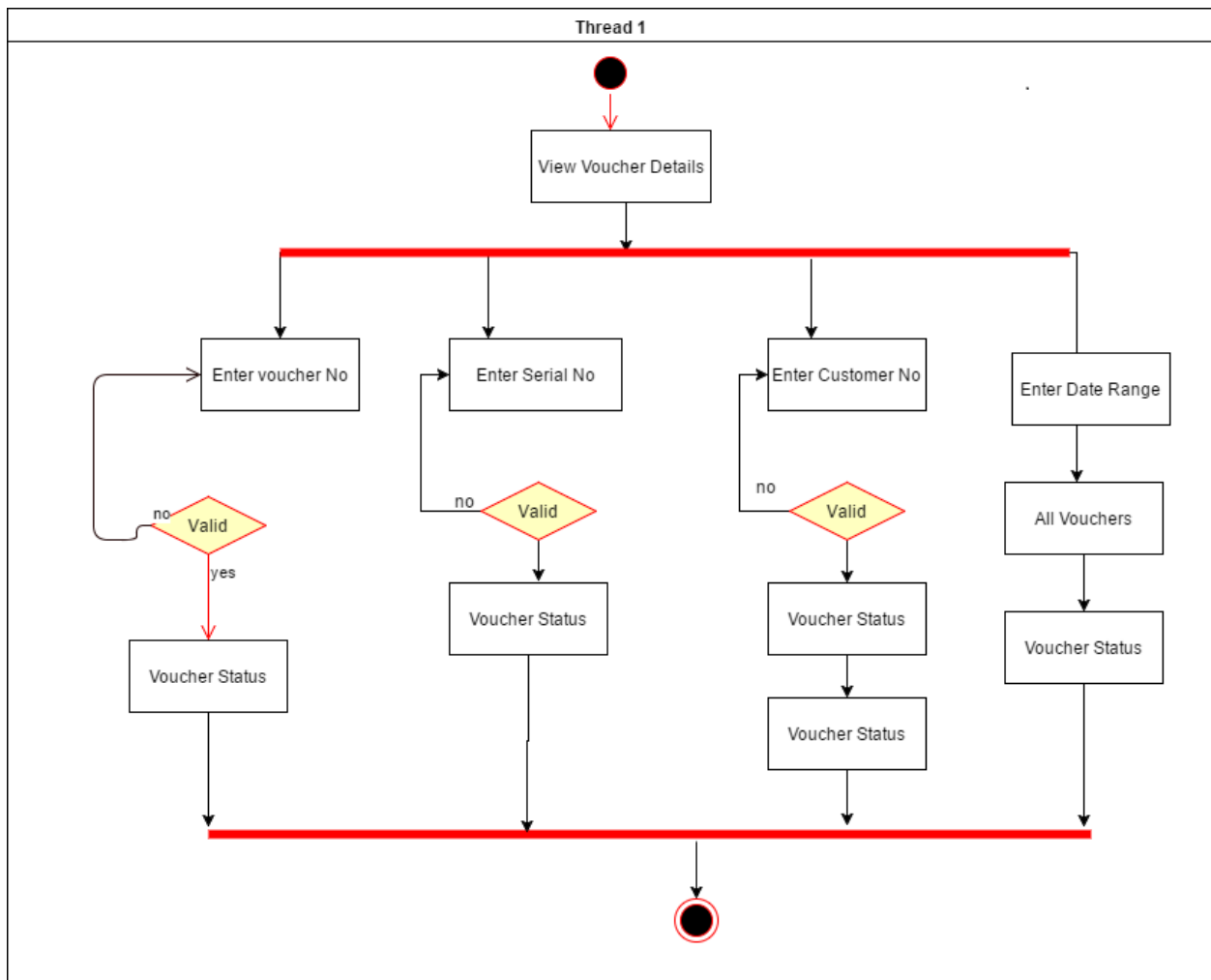




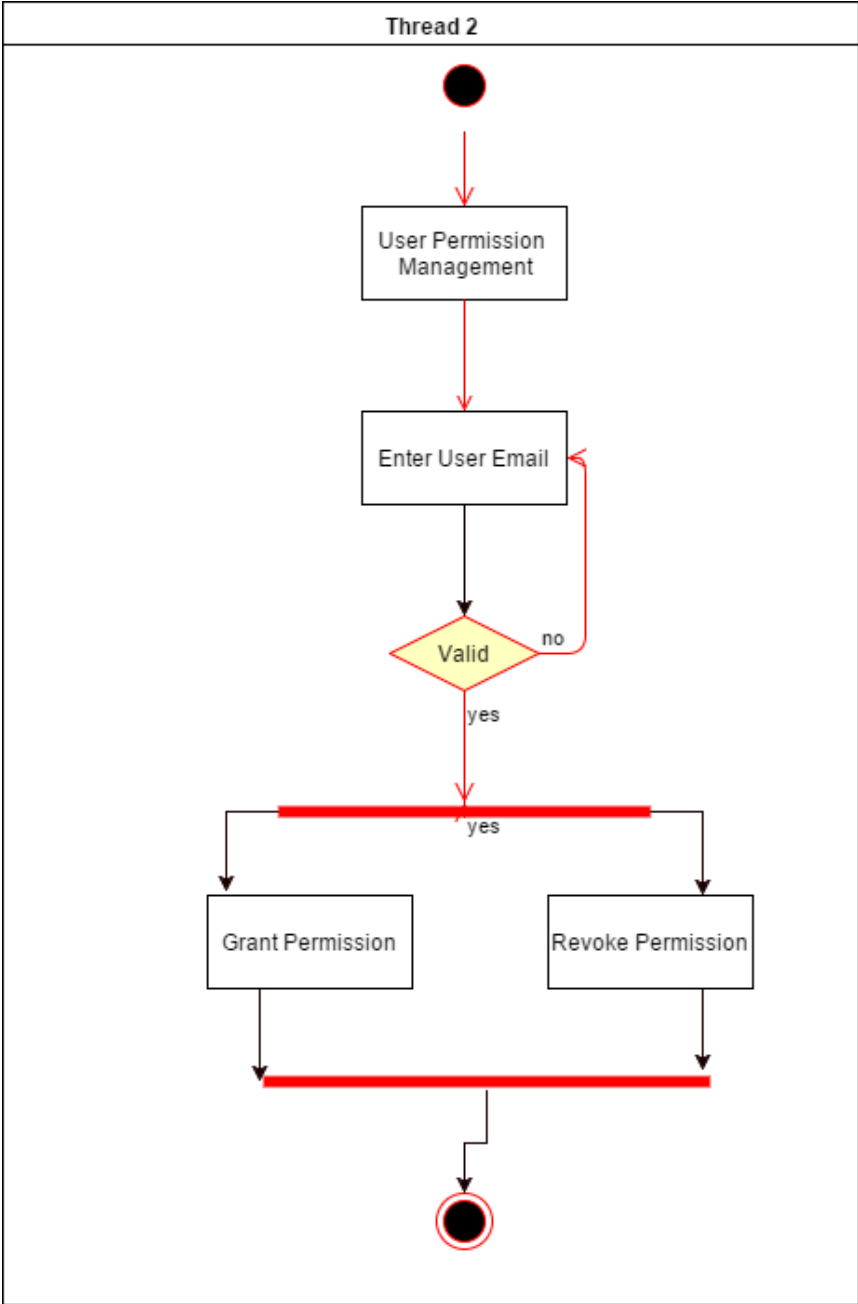
## ViewContractDetails



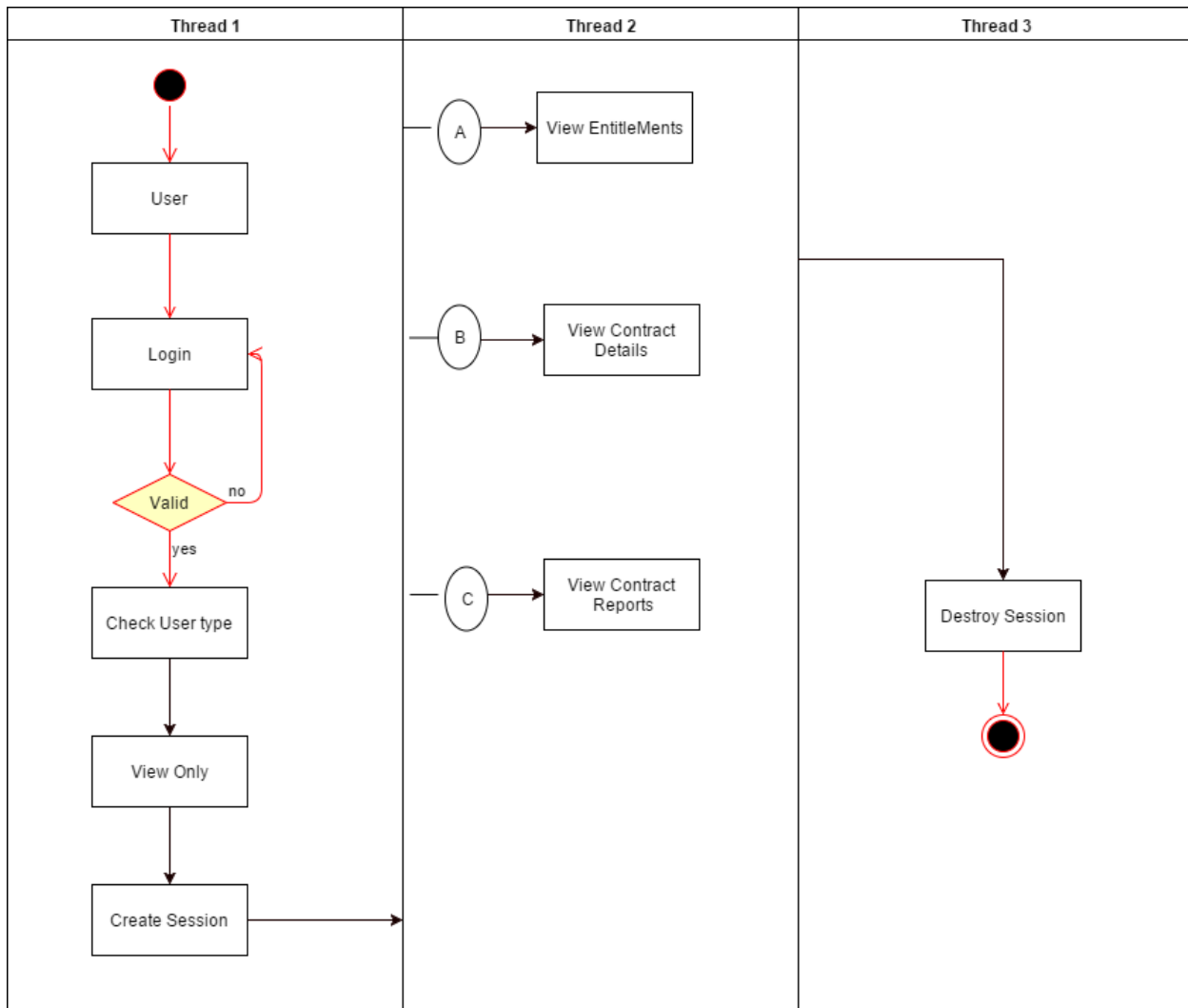
## View Voucher Details



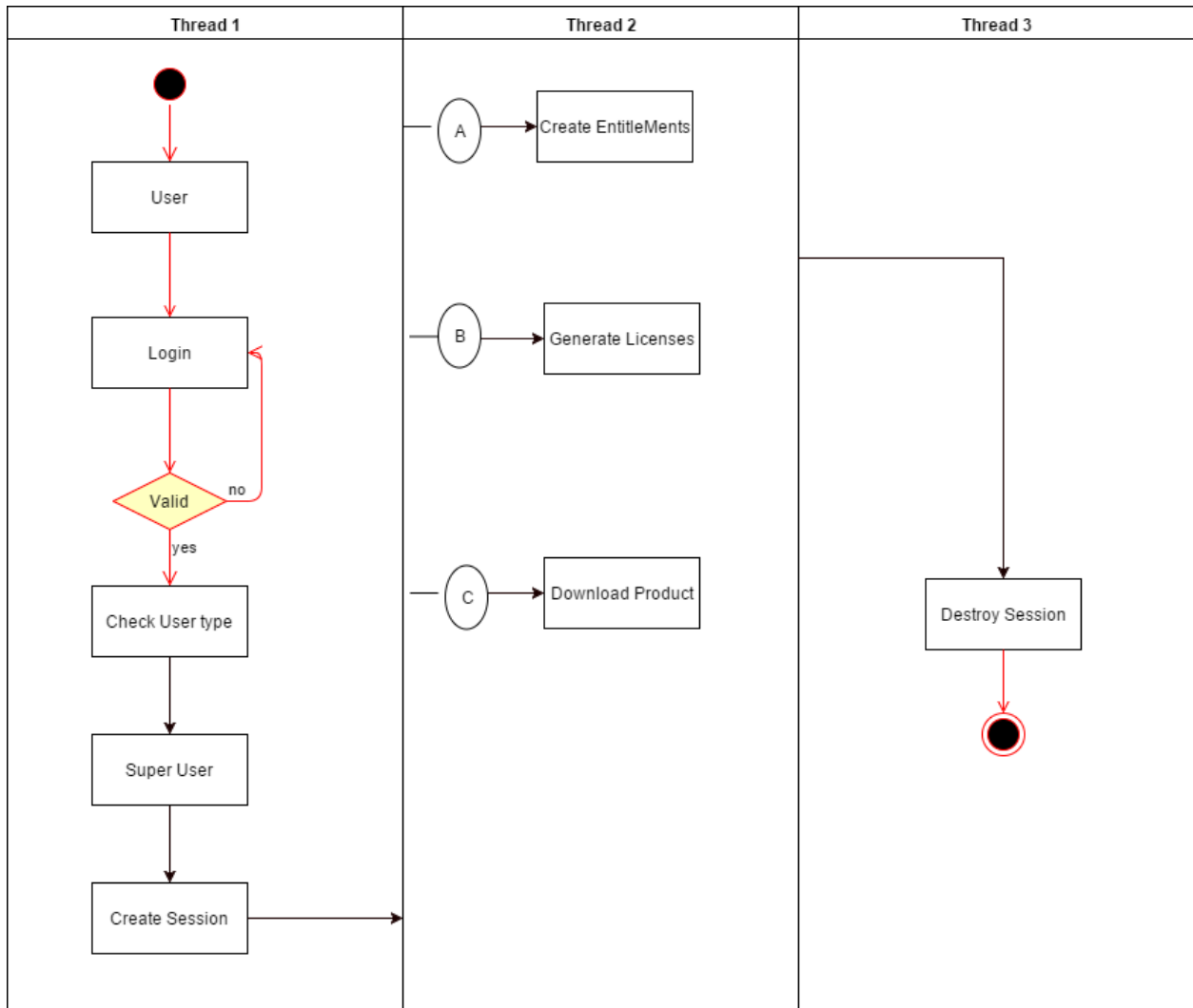
User Permission



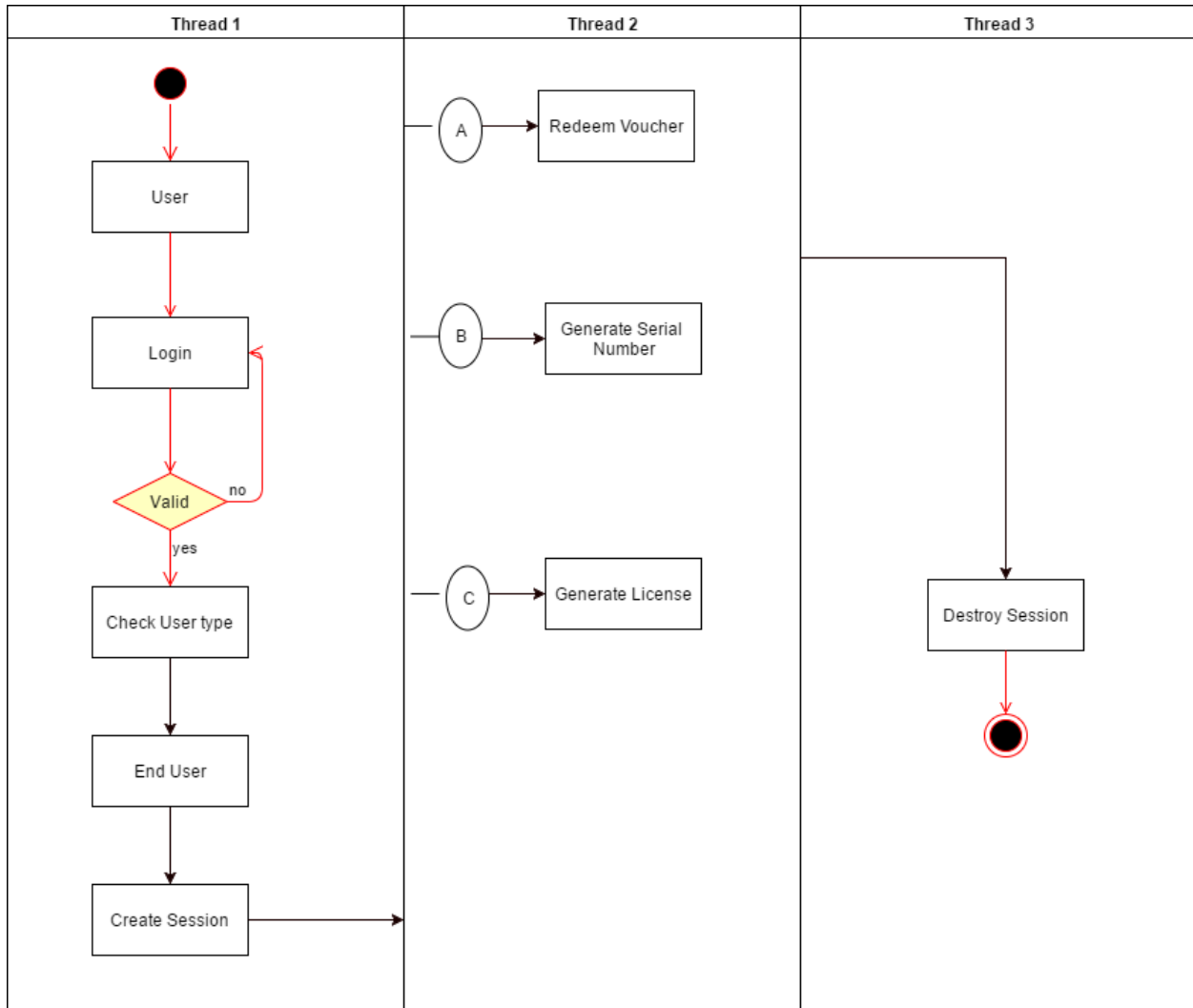
## View Only User



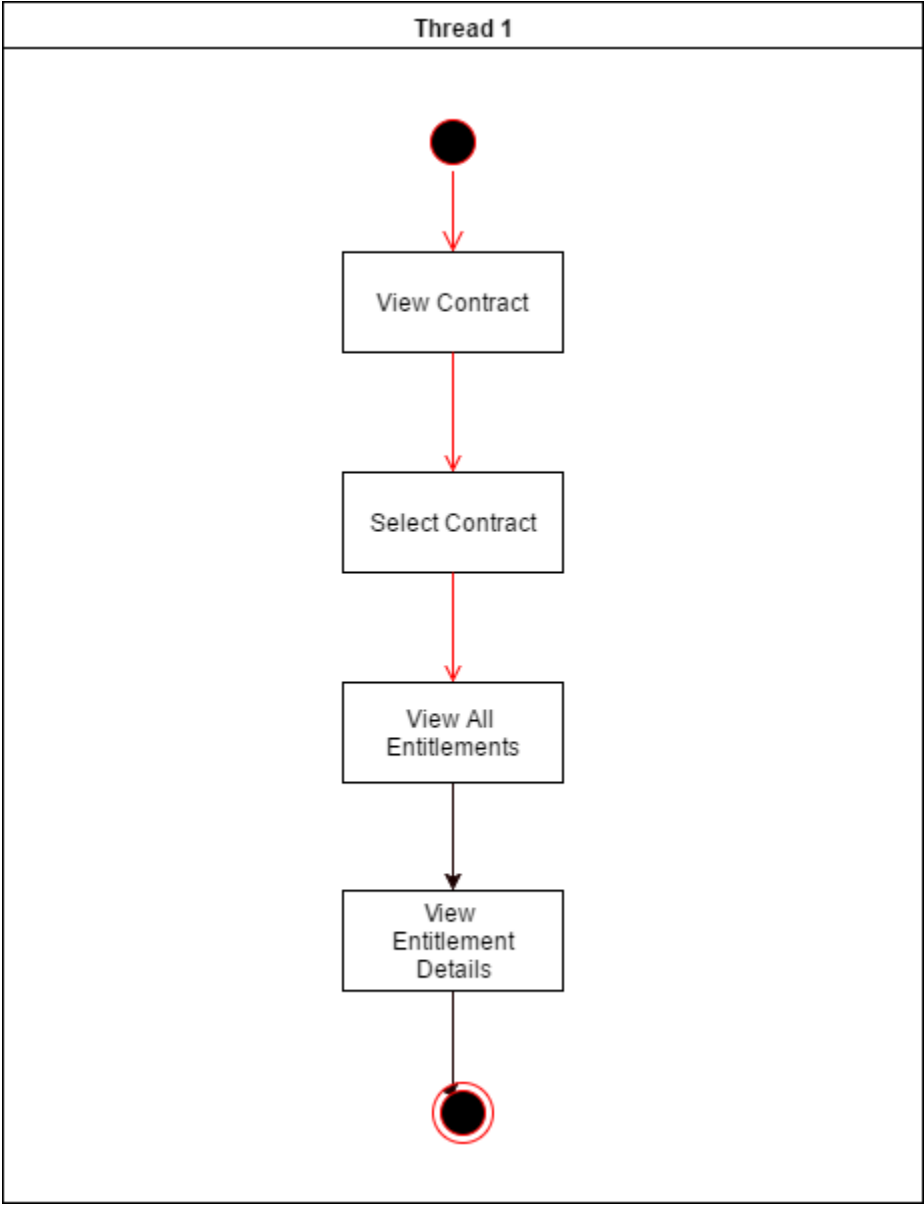
## Super User



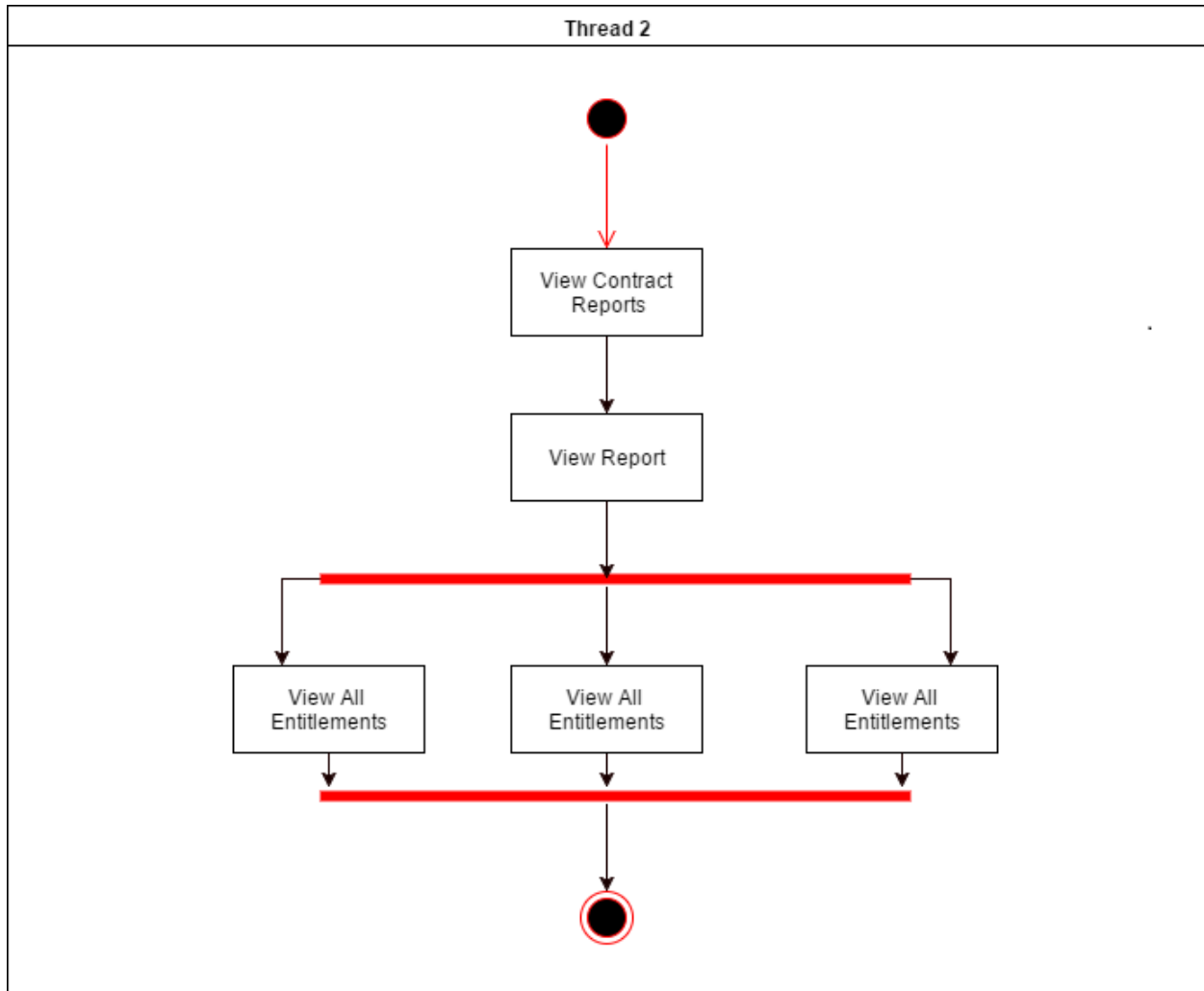
## End User



View Entitlement Details

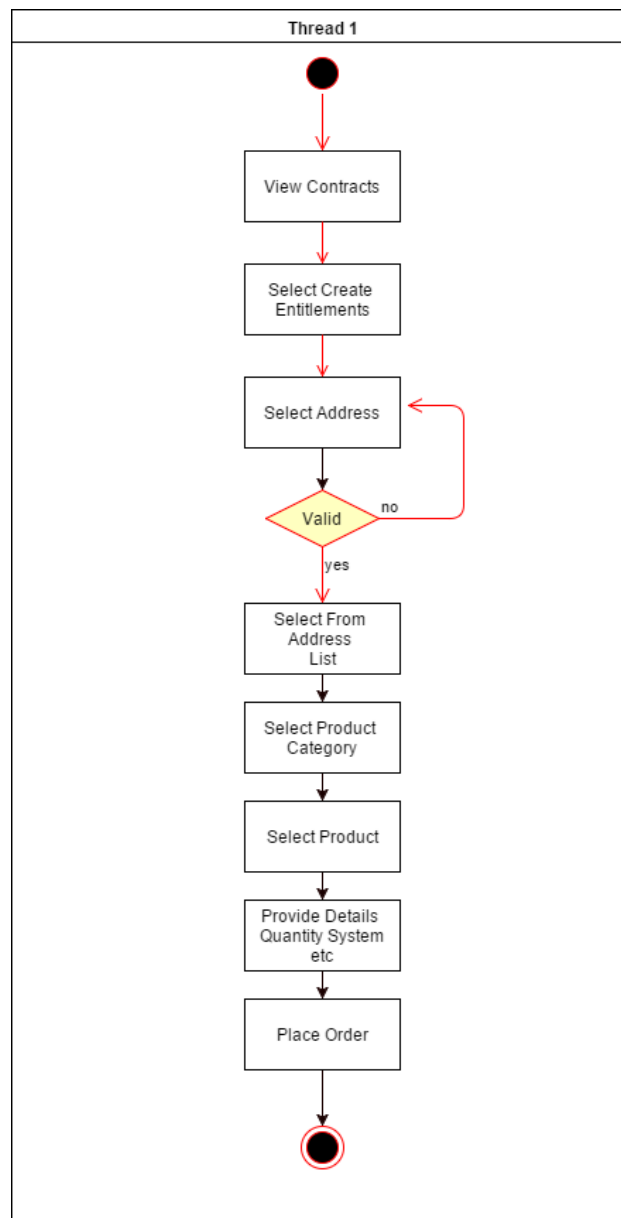


## View Contract Reports

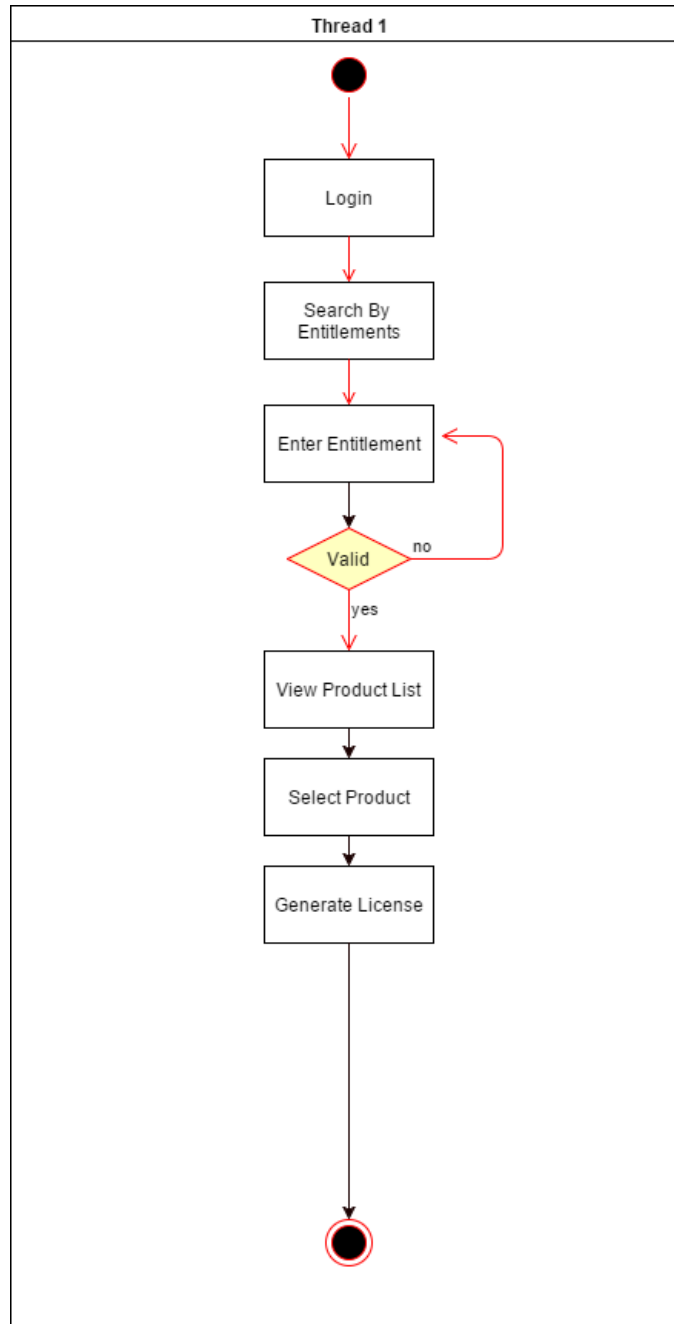




## Create Entitlements

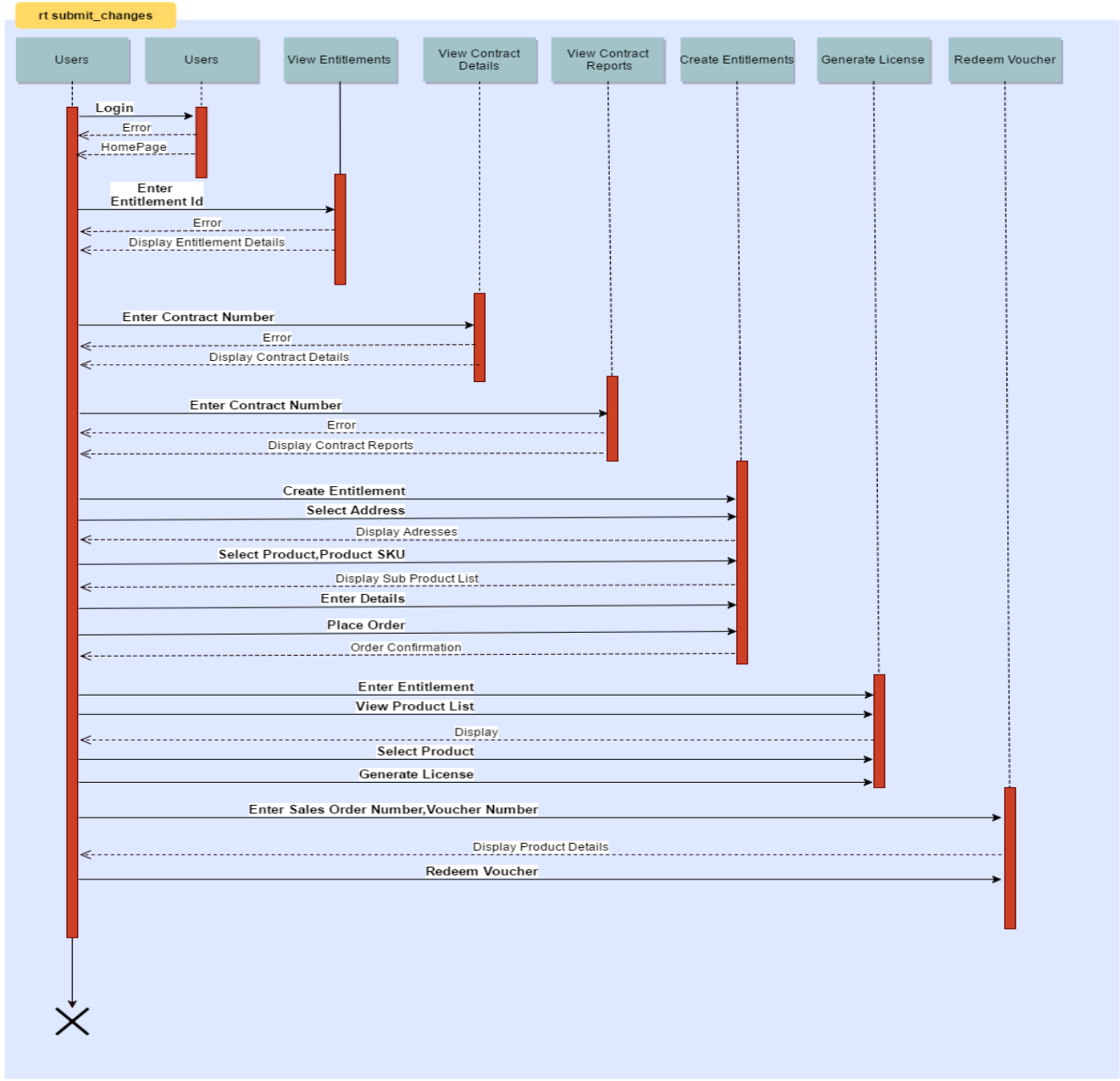


## Generate License

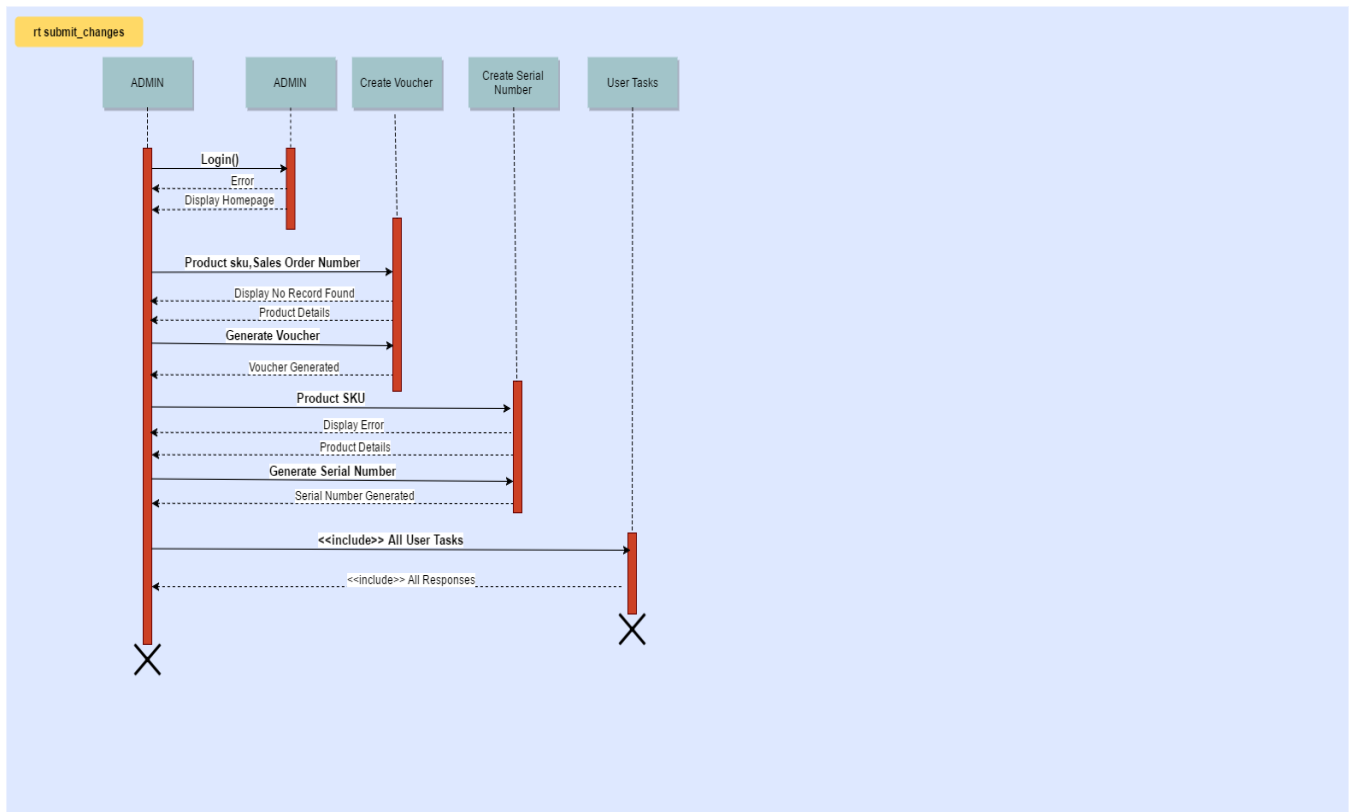


### 3.4 Sequence Diagrams

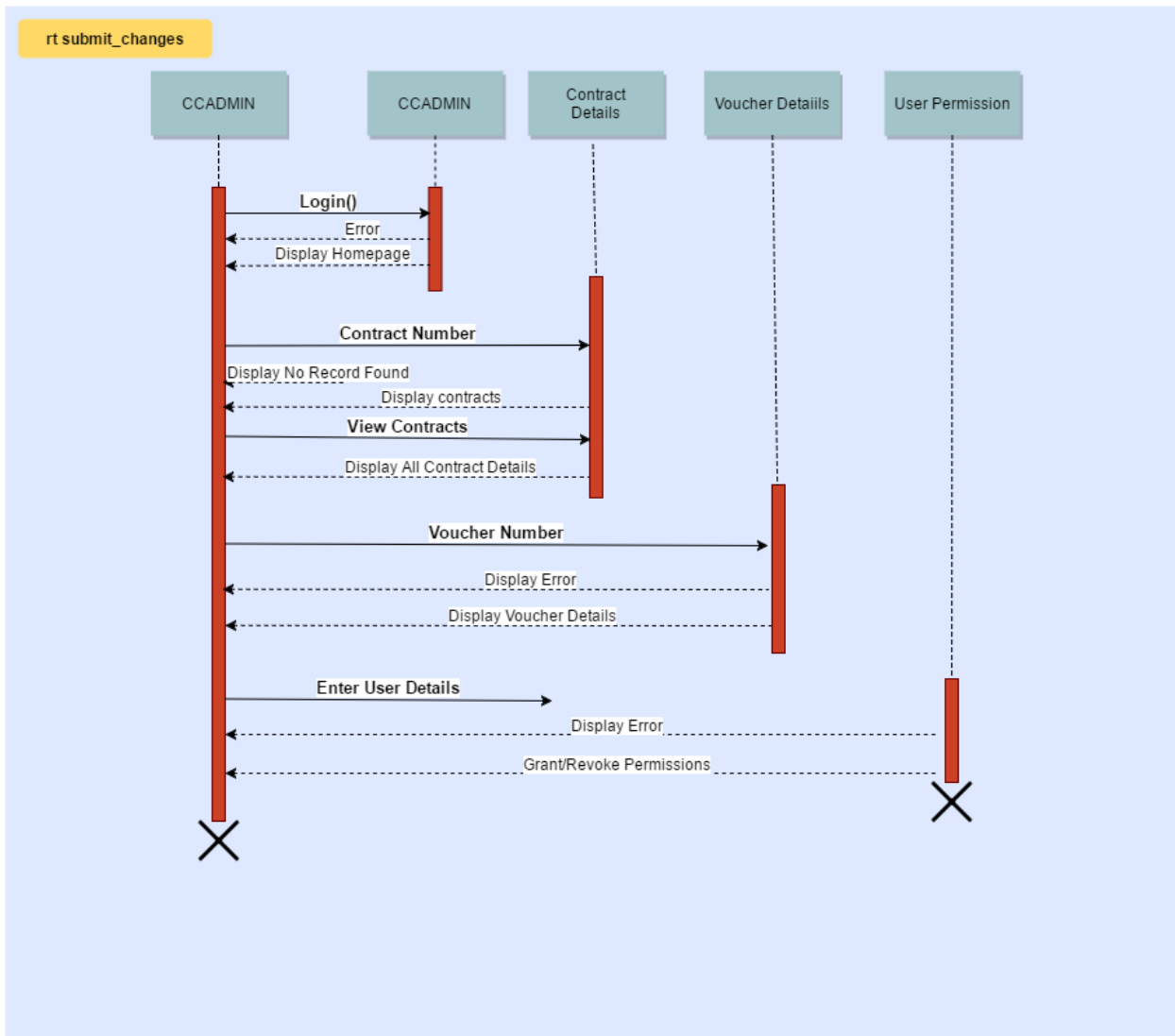
#### User



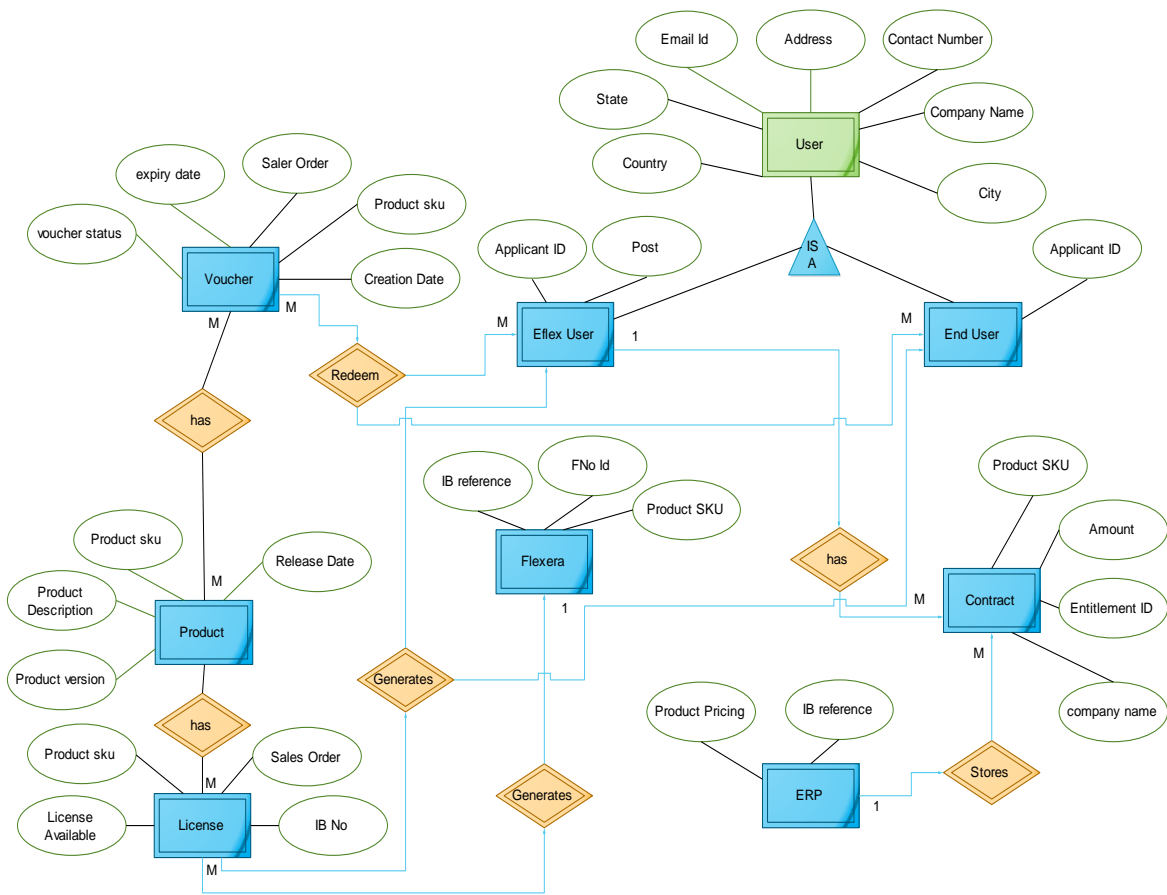
# Admin



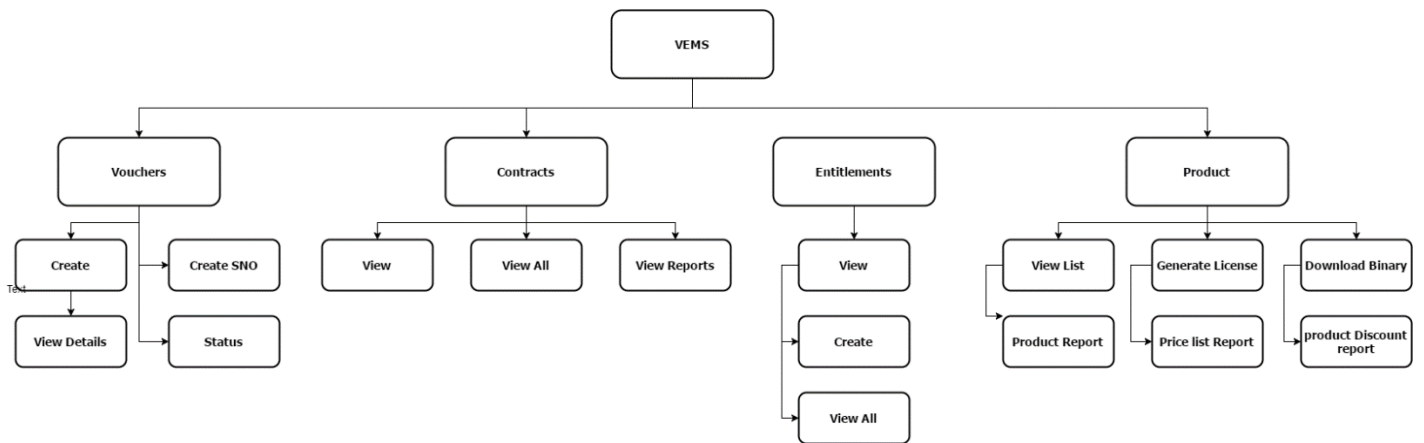
## View Only User



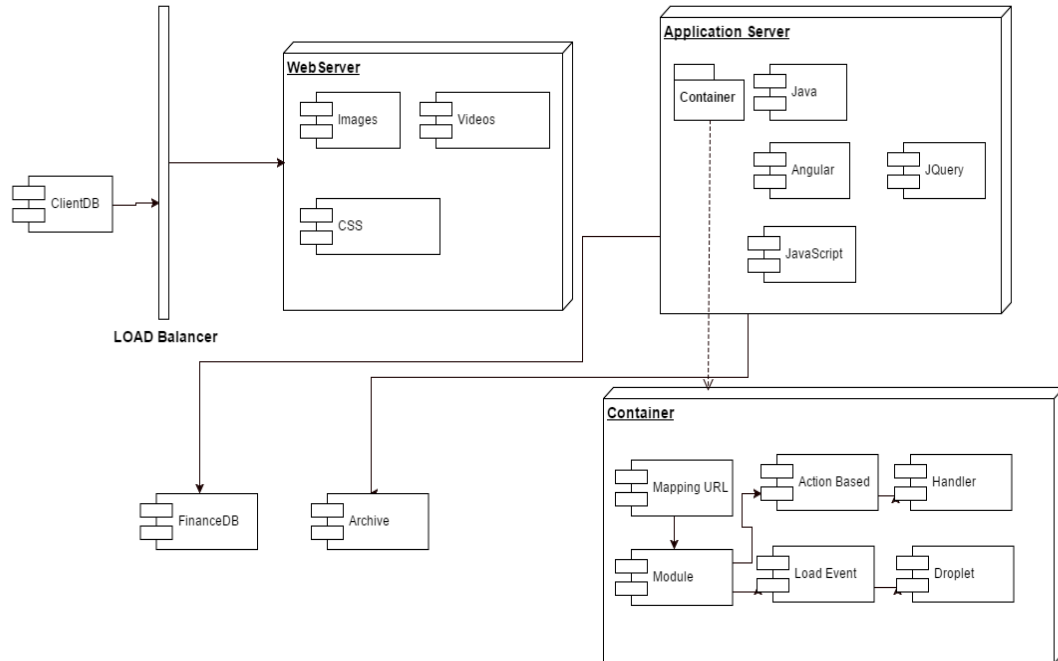
### 3.5 Entity Relationship Diagram



### 3.6 Module Hierarchy

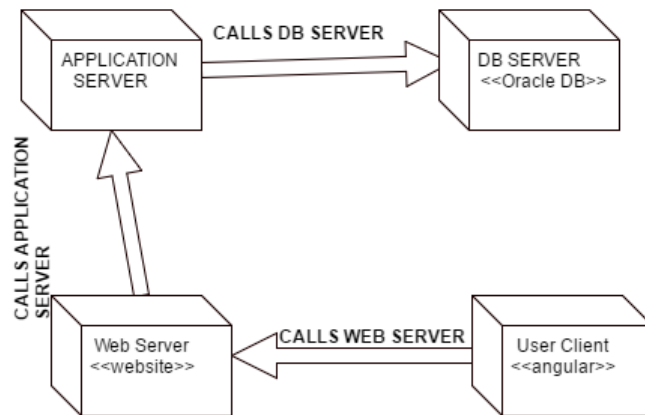


### 3.7 Component Diagram





### 3.8 Deployment Diagram



### **3.9 Module Specification**

- **Voucher**

This module contains the details of the voucher a user can use. The vouchers are created by the admin and serial number is generated by the admin.

- **Contracts**

This module contains the user contracts and the details of the contracts and corresponding reports.

- **Entitlements**

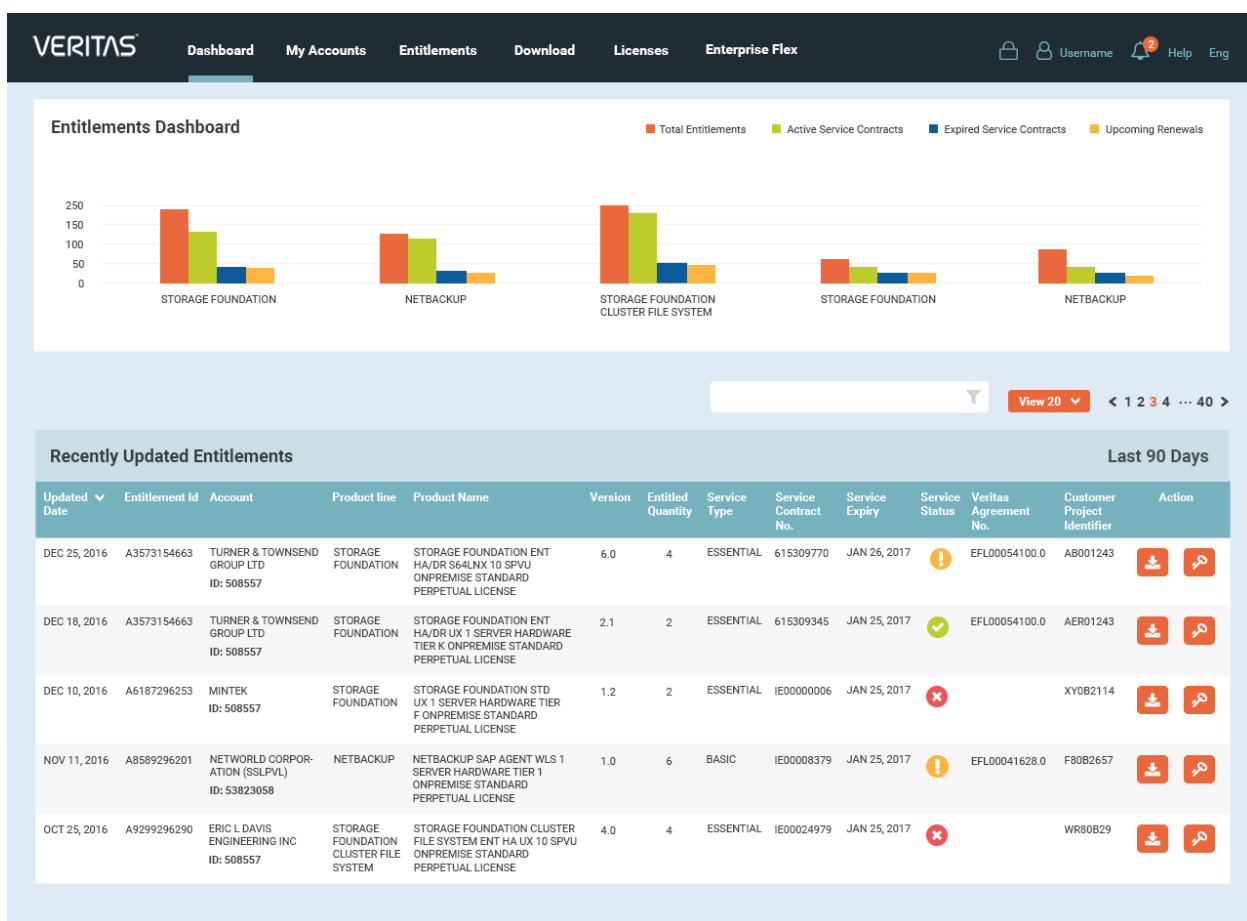
Entitlements module is used to create entitlements for a product and generate licenses for the corresponding entitlements.

- **Product**

Product module list all the products the licenses can be generated for the products and product binaries can be downloaded. Various reports can be generated for the products.

## 3.10 User Interface








### Main Dashboard



# My Accounts

VERITAS Dashboard My Accounts Entitlements Download Licenses Enterprise Flex Username Help Eng

My Accounts View 20 < 1 2 3 4 ... 40 >

Account	Account Id	User Type	Entitlement	Users	Account Note
AT & T Services	213408689	Administrator	08	10	<input type="text"/> 
ADB	214342349	Administrator	04	20	<input type="text"/> 
Bank Indonesia	423423452	Partner	10	15	<input type="text"/> 
Belgacom	235232643	Partner	05	20	<input type="text"/> 
Microsoft	213480689	Administrator	08	10	<input type="text"/> 
Adobe	214342349	Administrator	04	15	<input type="text"/> 
Bank Indonesia	423423458	Partner	05	20	<input type="text"/> 

# Entitlements

VERITAS														
<span>Dashboard</span> <span>My Accounts</span> <span style="background-color: #0070C0; color: white;">Entitlements</span> <span>Download</span> <span>Licenses</span> <span>Enterprise Flex</span> <span style="float: right;">  Username            Help            Eng         </span>														
Entitlements														
Updated Date		Entitlement Id		Account		Product Line								
More options											Export		View 20	< 1 2 3 4 ... 40 >
Updated Date	Entitlement Id	Account	Product line	Product Name	Version	Entitled Quantity	Service Type	Service Contract No.	Service Expiry	Service Status	Veritas Agreement No.	Customer Project Identifier	Action	
DEC 25, 2016	A3573154663	TURNER & TOWNSEND GROUP LTD ID: 508557	STORAGE FOUNDATION	STORAGE FOUNDATION ENT HA/DR S64LNX 10 SPVU ONPREMISE STANDARD PERPETUAL LICENSE	6.0	4	ESSENTIAL	615309770	JAN 26, 2017		EFL00054100.0	AB001243		
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DEC 10, 2016	A6187296253	MINTEK ID: 508557	STORAGE FOUNDATION	STORAGE FOUNDATION STD UX 1 SERVER HARDWARE TIER F ONPREMISE STANDARD PERPETUAL LICENSE	1.2	2	ESSENTIAL	IE00000006	JAN 25, 2017			XY0B2114		
NOV 11, 2016	A8589296201	NETWORLDCORPORATION (SSLPVL) ID: 53823058	NETBACKUP	NETBACKUP SAP AGENT WLS 1 SERVER HARDWARE TIER 1 ONPREMISE STANDARD PERPETUAL LICENSE	1.0	6	BASIC	IE00008379	JAN 25, 2017		EFL00041628.0	F80B2657		
OCT 25, 2016	A9299296290	ERIC L DAVIS ENGINEERING INC ID: 508557	STORAGE FOUNDATION CLUSTER FILE SYSTEM	STORAGE FOUNDATION CLUSTER FILE SYSTEM ENT HA UX 10 SPVU ONPREMISE STANDARD PERPETUAL LICENSE	4.0	4	ESSENTIAL	IE00024979	JAN 25, 2017			WR80B29		
OCT 24, 2016	A1129296278	ERIC L DAVIS ENGINEERING INC ID: 508557	STORAGE FOUNDATION CLUSTER FILE SYSTEM	STORAGE FOUNDATION ENT HA/DR UX 1 SERVER HARDWARE TIER A ONPREMISE STANDARD PERPETUAL LICENSE	4.2	9	ESSENTIAL	IE00028465	APR 08, 2017			D358B80		
OCT 22, 2016	A3190296212	ERIC L DAVIS ENGINEERING INC ID: 508557	STORAGE FOUNDATION CLUSTER FILE SYSTEM	STORAGE FOUNDATION FOR SYBASE ASE CE ENT UX 1 SERVER HARDWARE TIER C ONPREMISE STANDARD PERPETUAL LICENSE	1.2	2	ESSENTIAL	IE00028465	APR 12, 2017			D323558		
OCT 21, 2016	A1129296278	ERIC L DAVIS ENGINEERING INC ID: 508557	STORAGE FOUNDATION CLUSTER FILE SYSTEM	STORAGE FOUNDATION ENT HA/DR UX 1 SERVER HARDWARE TIER A ONPREMISE STANDARD PERPETUAL LICENSE	4.2	9	ESSENTIAL	IE00028465	APR 08, 2017			D358B80		
OCT 22, 2016	A3190296212	ERIC L DAVIS ENGINEERING INC	STORAGE FOUNDATION CLUSTER FILE SYSTEM	STORAGE FOUNDATION FOR SYBASE ASE CE ENT UX 1 SERVER HARDWARE TIER C ONPREMISE STANDARD PERPETUAL LICENSE	1.2	2	ESSENTIAL	IE00028465	APR 12, 2017			D323558		

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Updated Date	Entitlement Id	Account	Product Line	Product Name	Version	Entitled Quantity	Service Type	Service Contract No.	Service Expiry	Service Status	Veritas Agreement No.	Customer Project Identifier	Action
DEC 25, 2016	A3573154663	TURNER & TOWNSEND GROUP LTD ID: 508557	STORAGE FOUNDATION	HA/DR S64LNX 10 SPVU ONPREMISE STANDARD PERPETUAL LICENSE		4	ESSENTIAL	615309770	JAN 26, 2017	<span style="color: orange;">!</span>	EFL00054100.0	AB001243	
DEC 18, 2016	A3573154663	TURNER & TOWNSEND GROUP LTD ID: 508557	STORAGE FOUNDATION	STORAGE FOUNDATION ENT HA/DR UX 1 SERVER HARDWARE TIER K ONPREMISE STANDARD PERPETUAL LICENSE	2.1	2	ESSENTIAL	615309345	JAN 25, 2017	<span style="color: green;">✓</span>	EFL00054100.0	AER01243	
DEC 10, 2016	A6187296253	MINTEK ID: 508557	STORAGE FOUNDATION	STORAGE FOUNDATION STD UX 1 SERVER HARDWARE TIER F ONPREMISE STANDARD PERPETUAL LICENSE	1.2	2	ESSENTIAL	IE00000006	JAN 25, 2017	<span style="color: red;">✗</span>		XY0B2114	
NOV 11, 2016	A8589296201	NETWORLD CORPORATION (SSLPVL) ID: 53823058	NETBACKUP	NETBACKUP SAP AGENT WLS 1 SERVER HARDWARE TIER 1 ONPREMISE STANDARD PERPETUAL LICENSE	1.0	6	BASIC	IE00008379	JAN 25, 2017	<span style="color: orange;">!</span>	EFL00041628.0	F80B2657	
OCT 25, 2016	A9299296290	ERIC L DAVIS ENGINEERING INC ID: 508557	STORAGE FOUNDATION CLUSTER FILE SYSTEM	STORAGE FOUNDATION CLUSTER FILE SYSTEM ENT HA/DR UX 1 SERVER HARDWARE TIER A ONPREMISE STANDARD PERPETUAL LICENSE	4.0	4	ESSENTIAL	IE00024979	JAN 25, 2017	<span style="color: red;">✗</span>		WR80B29	
OCT 24, 2016	A1129296278	ERIC L DAVIS ENGINEERING INC ID: 508557	STORAGE FOUNDATION CLUSTER FILE SYSTEM	STORAGE FOUNDATION ENT HA/DR UX 1 SERVER HARDWARE TIER A ONPREMISE STANDARD PERPETUAL LICENSE	4.2	9	ESSENTIAL	IE00028465	APR 08, 2017	<span style="color: orange;">!</span>		D358B80	
OCT 22, 2016	A3190296212	ERIC L DAVIS ENGINEERING INC ID: 508557	STORAGE FOUNDATION CLUSTER FILE SYSTEM	STORAGE FOUNDATION FOR SYBASE ASE CE ENT UX 1 SERVER HARDWARE TIER C ONPREMISE STANDARD PERPETUAL LICENSE	1.2	2	ESSENTIAL	IE00028465	APR 12, 2017	<span style="color: green;">✓</span>		D323558	
OCT 21, 2016	A1129296278	ERIC L DAVIS ENGINEERING INC ID: 508557	STORAGE FOUNDATION CLUSTER FILE SYSTEM	STORAGE FOUNDATION ENT HA/DR UX 1 SERVER HARDWARE TIER A ONPREMISE STANDARD PERPETUAL LICENSE	4.2	9	ESSENTIAL	IE00028465	APR 08, 2017	<span style="color: orange;">!</span>		D358B80	

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**Entitlements**

Updated Date

Entitlement Id

TURNER & TOWNSEND GROUP LTD

Product Line

Product Name

Version

Entitled Quantity

Service Type

Service Contract Number

Service Expiry

Veritas Agreement Number

Project ID

Tag 1

Tag 2

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Current Month x

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Updated Date	Entitlement Id	Account	Product line	Product Name	Version	Entitled Quantity	Service Type	Service Contract No.	Service Expiry	Service Status	Veritas Agreement No.	Customer Project Identifier	Action
DEC 25, 2016	A3573154663	TURNER & TOWNSEND GROUP LTD ID: 508557	STORAGE FOUNDATION	STORAGE FOUNDATION ENT HA/DR S64LNK 10 SPVU ONPREMISE STANDARD PERPETUAL LICENSE	6.0	4	ESSENTIAL	615309770	JAN 26, 2017	!	EFL00054100.0	AB001243	<span style="color: orange;">↓</span> <span style="color: orange;">↻</span>

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Product Version	Actions
INFOSCALE STORAGE WIN 1 CORE ONPREMISE STANDARD PERPETUAL LICENSE VERSION: 5.0	Download
INFOSCALE STORAGE WIN 1 CORE ONPREMISE STANDARD PERPETUAL LICENSE VERSION: 4.0	Download
INFOSCALE STORAGE WIN 1 CORE ONPREMISE STANDARD PERPETUAL LICENSE VERSION: 1.0	Download
INFOSCALE STORAGE WIN 1 CORE ONPREMISE STANDARD PERPETUAL LICENSE VERSION: 5.0	Download
INFOSCALE STORAGE WIN 1 CORE ONPREMISE STANDARD PERPETUAL LICENSE VERSION: 5.0	Download
INFOSCALE STORAGE WIN 1 CORE ONPREMISE STANDARD PERPETUAL LICENSE VERSION: 4.2	Download
INFOSCALE STORAGE WIN 1 CORE ONPREMISE STANDARD PERPETUAL LICENSE VERSION: 1.0	Download
INFOSCALE STORAGE WIN 1 CORE ONPREMISE STANDARD PERPETUAL LICENSE VERSION: 5.0	Download



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<input type="checkbox"/> VERITAS_INFOSCALE_7_2_WINDOWS.ISO	NETBACKUP APPLIANCE 5330 APPLIANCES SERVER 2.1.0.0 README IE.TXT	531.2 KB	MD576392h4629djwnc73927492ksu39	Linux	
<input type="checkbox"/> VERITAS_INFOSCALE_DYNAMIC_MULTI-PATHING_7_2_VMWARE.ZIP	NETBACKUP APPLIANCE 5330 APPLIANCES SERVER 2.1.0.0 README IE.TXT	33 KB	MD576392h4629djwnc73927492ksu39	CROSS PLATFORM	
<input type="checkbox"/> VRTS_SFVHA_6.1_WINDOWS_TOOLS.ZIP	NETBACKUP APPLIANCE 5330 APPLIANCES SERVER 2.1.0.0 README IE.TXT	24.7 KB	MD576392h4629djwnc73927492ksu39	Linux	
<input type="checkbox"/> VERITAS_INFOSCALE_7_2_WINDOWS.ISO	NETBACKUP APPLIANCE 5330 APPLIANCES SERVER 2.1.0.0 README IE.TXT	231 KB	MD576392h4629djwnc73927492ksu39	CROSS PLATFORM	

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Entitlement Id	Account	Product line	Product name	Date Generated	Version	Quantity	Email	License Key	View Comments	Actions
A3573154663	TURNER & TOWNSEND GROUP LTD ID: 508557	STORAGE FOUNDATION	STORAGE FOUNDATION ENT HA/DR S64LNK 10 SP/1 ONPREMISE STANDARD PERPETUAL LICENSE	DEC 25, 2016	6.0	04	Johnroot@gmail.com	A7433242888_QTY17_BE_15_AGENT_APP_DB_LIC_309942407.sif		
A3573154663	TURNER & TOWNSEND GROUP LTD ID: 508557	STORAGE FOUNDATION	STORAGE FOUNDATION ENT HA/DR UX 1 SERVER HARDWARE TIER K ONPREMISE STANDARD PERPETUAL LICENSE	DEC 10, 2016	1.2	10	Johnroot@gmail.com	BID69247QTY17_B87H_15AGENT_APP_DB_LIC_3423.sif		
A6187296253	MINTEK ID: 508557	STORAGE FOUNDATION	STORAGE FOUNDATION STD UX 1 SERVER HARDWARE TIER F ONPREMISE STANDARD PERPETUAL LICENSE	NOV 11, 2016	2.0	01	Johnroot@gmail.com	AZEHN - 1241F - OE104 - MNZR1		
A8589296201	NETWORLD CORPORATION (SPLVLL) ID: 53823058	NETBACKUP	NETBACKUP SAP AGENT WLS 1 SERVER HARDWARE TIER 1 ONPREMISE STANDARD PERPETUAL LICENSE	OCT 25, 2016	5.0	05	Johnroot@gmail.com	12328376AREF_012_BE_15_AGENT_APP_DB_LIC_HABH.sif		
A9299296290	ERIC L DAVIS ENGINEERING INC ID: 508557	STORAGE FOUNDATION	STORAGE FOUNDATION CLUSTER FILE SYSTEM ENT HA UX 10 SP/1 ONPREMISE STANDARD PERPETUAL LICENSE	AUG 08, 2016	4.0	06	Johnroot@gmail.com	GNBDH - 1127G - OE104 - MNZ32		
A1129296278	ERIC L DAVIS ENGINEERING INC ID: 508557	STORAGE FOUNDATION	STORAGE FOUNDATION ENT HA/DR UX 1 SERVER HARDWARE TIER A ONPREMISE STANDARD PERPETUAL LICENSE	MAR 01, 2016	4.2	04	Johnroot@gmail.com	A7433242888_QTY17_BE_15_AGENT_APP_DB_LIC_309942407.sif		
A3190296212	ERIC L DAVIS	NETBACKUP	STORAGE FOUNDATION	MAR 01, 2016	1.1	10	Johnroot@gmail.com	A7433242888_QTY17_BE		

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GENERATE KEY

**STORAGE FOUNDATION ENT HA/DR S64LNX 10 SPVU  
ONPREMISE STANDARD PERPETUAL LICENSE**

Generated License Keys **02**

Account Name: **MINTEK** Account No.: **ID: 508557**  
Entitlement ID: **A3573154663** Entitled Qty.: **4**  
IB Ref No: -- SC No.:--  
Service Expiry Date: **26-Jan-2017** VAN.:--  
Project ID: --

Product Version	
STORAGE FOUNDATION ENT HA/DR S64LNX 10 SPVU ONPREMISE STANDARD PERPETUAL LICENSE	Version: 6.0
STORAGE FOUNDATION ENT HA/DR S64LNX 10 SPVU ONPREMISE STANDARD PERPETUAL LICENSE	Version: 4.0
STORAGE FOUNDATION ENT HA/DR S64LNX 10 SPVU ONPREMISE STANDARD PERPETUAL LICENSE	Version: 1.0
STORAGE FOUNDATION ENT HA/DR S64LNX 10 SPVU ONPREMISE STANDARD PERPETUAL LICENSE	Version: 5.0
STORAGE FOUNDATION ENT HA/DR S64LNX 10 SPVU ONPREMISE STANDARD PERPETUAL LICENSE	Version: 5.0
STORAGE FOUNDATION ENT HA/DR S64LNX 10 SPVU ONPREMISE STANDARD PERPETUAL LICENSE	Version: 4.2

How much of your license quantity would you like to deploy?

**04** ▾

Comments

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# ADMIN

Manage UserManage Flex UserManage Group

+ Add New Member+ Add Account to existing Member

**Member Name**

**Select Entitlement Subgroups**

<input checked="" type="checkbox"/> Entitlement Group 1	<input type="checkbox"/> Entitlement Group 2	<input type="checkbox"/> Entitlement Group 3	<input checked="" type="checkbox"/> Entitlement Group 4	<input type="checkbox"/> Entitlement Group 5
<input checked="" type="checkbox"/> Entitlement Group 6	<input checked="" type="checkbox"/> Entitlement Group 7	<input checked="" type="checkbox"/> Entitlement Group 8	<input type="checkbox"/> Entitlement Group 9	<input checked="" type="checkbox"/> Entitlement Group 10
<input type="checkbox"/> Entitlement Group 11	<input type="checkbox"/> Entitlement Group 12	<input checked="" type="checkbox"/> Entitlement Group 13	<input checked="" type="checkbox"/> Entitlement Group 14	<input type="checkbox"/> Entitlement Group 15
<input type="checkbox"/> Entitlement Group 16	<input type="checkbox"/> Entitlement Group 17	<input type="checkbox"/> Entitlement Group 18		

<input type="checkbox"/> Account	Account ID	Administrator	Download	License
<input type="checkbox"/> AT & T IM UNLIMITED FLEX	508557	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/> AT & T IM CONTRACTS UNLIMITED FLEX	508545	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/> AT & T IM UNLIMITED FLEX	308557	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/> BANK INDONESIA UNLIMITED FLEX	508482	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> BELGACOM UNLIMITED FLEX CONTRACTS	103457	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> BELGACOM UNLIMITED FLEX CONTRACTS	103457	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> BELGACOM UNLIMITED FLEX	283453	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

# Register New Account

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### Why registration is required

This registration page is only for few customers who have purchased licenses that require registration. Your product only requires registration if the documentation provided with your purchase specifically says that you need to register your products. If your product does not require registration, then you may have an issue with your license portal account. Please see the licensing portal users guide for more details on the licensing portal, and for how to validate your access to the Licensing Portal. If you have any questions, please contact customer care.

I have a certificate with serial number  
 I have a voucher Document

Serial Number or Entitlement ID

+ Add More

### License Information

First Name	Last Name	Email	Company Name	
<input type="text" value="John"/>	<input type="text" value="Root"/>	<input type="text" value="john_root1982@abc.com"/>	<input type="text"/>	
Phone Number	Extension	Address	City	State/ Province
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Zip/ Postal Code	Country	OEM Partner Email Address		
<input type="text"/>	<input type="text"/>	<input type="text"/>		

### Trade Compliance

GMP: Is the end user a government, military or police entity or is the end user government military and police entity or related to government, military or police?    Yes    No

Nuclear: Is the end-user related to any nuclear activities included including, but not limited to explosive activities, certain safe guarded and unguarded nuclear activities or in a maritime nuclear propulsion project?    Yes    No

Space: Is the end-user related to the design, development, production or use of space launch vehicles?    Yes    No

Missile: Is the end-user related to the design, development, production or use of space launch missiles?    Yes    No

**Complete Registration**

## Create Serial Number

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**Create Serial Number**

Product SKU:  Number of serial numbers to create:

**Confirm SKU Details**

SKU:	21344324
Description:	BACKUP EXEC 15 AGENT FOR APPLICATION AND DATABASES WIN ML PER SERVER BNDL BUS PAC BASIC 12 MONTHS
SKU Status:	NS-Active
No. of Serial Number:	2

# Voucher Creation

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### Create Vouchers

Please input voucher information to create voucher(s).

SKU (S) will be

Customer SKU  Veritas SKU

Sales Order:  Sales Order Date:

Voucher generated will be

Standard Voucher  Bundled voucher

### 3.11 Data Dictionary

#### EntCntrDtls

1	ID	NUMBER	PK	Veritas Entitlement Header ID - Sequence VEMS_CONTRACT_DTLS_S
2	ENTSOU	VARCHAR 2(30)		Entitlement Source such as ELA/SMB/VC
3	CUSTACCID	NUMBER		Account ID will be populated from Vems-Cust_accounts
4	NUMBER	VARCHAR 2		Service Contract Number
5	NUMMODIFIER	VARCHAR 2(120)		Renewed Service contract modifier
6	AGREEMENTNO	VARCHAR 2(120)		Veritas agreement number
7	AMT	NUMBER		Contract Amount
8	BAL	NUMBER		Contract Available Balance
9	STATUS	VARCHAR 2(30)		Service Contract Status and EFLEX contract status
10	TARTDATE	DATE		Contract start date
11	ENDDATE	DATE		Contract end date



**ENT**

1	ID	NUMBER	PK	Veritas Entitlement ID - Sequence VEMS_ENT_S
2	CONTRDTLSID	NUMBER		ID from contract details table
3	INSTANCENUMBER	VARCHAR2(30)		IB Instance number from ERP
4	VEMSID	VARCHAR2(11)		Veritas Entitlement ID - Unique number generated with an algorithm
5	LICSLID	VARCHAR2	30	Random Number will be generated and '.7' will appended to the random number
6	QUANTITY	NUMBER		Install Base quantity

**CUSTMAP**

1	ID	NUMBER	PK	Unique Sequence :VEMS_CUST_SKU_MAP_S
2	PRDVERID	NUMBER		Veritas SKU id
3	MAINTPRDVERID	NUMBER		Associated maintenance product ( VEMS_PRD_VER_ID from VEMS_SYSTEM_PRODUCT) with base product
4	CUSTOMERSKU	VARCHAR2	240	Corresponding Customer SKU, will be entered by customer

5	VEMSCUSTACCOU NTID	NUMBER		SKU Permission to OEM Partner. Partner ID will be populated here
6	STATUS	VARCHAR2	30	Active / Not Active

**ENTPROD**

1	ID	NUMBER	PK	Entitlement Line Product ID
2	ENTID	NUMBER		VEMS Entitlement line id
3	PRDVERID	NUMBER		PRDVERID (unique sequence Number) from System product Table
4	STATUS	VARCHAR2	30	Status
5	CREATEDBY	NUMBER		Who Columns to tack the record insert/update
6	CREATIONDATE	DATE		Who Columns to tack the record insert/update
7	LASTUPDATEDBY	NUMBER		Who Columns to tack the record insert/update
8	LASTUPDATEDATE	DATE		Who Columns to tack the record insert/update

**Prod**

1	PRDVERID	NUMBER	PK	Unique Sequence, PRDVERS
2	PRODLINE	VARCHAR2	240	Product Line
3	BASESKU	VARCHAR2	40	Item Number from ERP
4	SKU_DESCRIPTION	VARCHAR2	240	Item Description from ERP
5	PRODCODE	VARCHAR2	60	Versioned Product Identifier
6	PRODDESC	VARCHAR2	240	Versioned Product Description
7	PRODVER	NUMBER		Version Number
8	PRODSTATUS	VARCHAR2	10	Status of the product if active or Inactive
9	PRODPLATFORM	VARCHAR2	150	Product Usage Type From ERP
10	PRODTYPE	VARCHAR2	150	Product Type From ERP
11	PRODSUBTYPE	VARCHAR2	150	Product Sub Type From ERP
12	PRODUSAGETYPE	VARCHAR2	150	Product Usage Type From ERP
13	PRODENTTYPE	VARCHAR2	150	Product Entitlement Type
14	PRODEXT	VARCHAR2	150	Product Entitlement Type
15	PRODFULTYPE	VARCHAR2	150	Product Entitlement Type
16	LICTYPE	VARCHAR2	30	Type of License file it will generate
17	PRODPRICE	NUMBER		Product Variable Price only stored here

## PRODFILES

1	ID	NUMBER	PK	Unique Sequence
2	PRDVERID	NUMBER		PRDVERID of the systemproducts , the file is associated with
3	FNAME	VARCHAR2	30	Name of the file
4	FDESC	VARCHAR2	240	File Description
5	FSIZE	NUMBER		Size of the file in bytes
6	LIMITDOWNLD	VARCHAR2	1	If the download is limiting to Max number
7	DOWNLDCNT	NUMBER		Number of Download

## CUSTACC

1	CUSTACCID	NUMBER	PK	Unique Sequence
2	PARTYNO	VARCHAR2	30	Party Number from ERP
3	PARTYNAME	VARCHAR2	360	Party Name
4	ACCNO	VARCHAR2	30	Customer Account Number
5	ACCNAME	VARCHAR2	360	Account Name
6	STATUS	VARCHAR2	10	Status of the account
7	NOTIFYPRIMARY	VARCHAR2	1	If Yes, all email communication will be sent to the primary contact only
8	SALESCHANNELCDE	VARCHAR2	30	Sales channel Code from ERP

## CUSTADDR

1	CUSTADDRID	NUMBER	PK	Unique Sequence
2	CUSTACCID	NUMBER		VEMS customer ID
3	PARTYSITENO	VARCHAR2	30	Site Number from ERP
4	SITEUSECODE	VARCHAR2	30	Site use code such as bill_to, Ship_to

5	ADDRESS1	VARCHAR2	240	address 1 of the site
6	ADDRESS2	VARCHAR2	240	address 1 of the site
7	ADDRESS3	VARCHAR2	240	address 1 of the site
8	ADDRESS4	VARCHAR2	240	address 1 of the site
9	CITY	VARCHAR2	60	City of the site location
10	STATE	VARCHAR2	60	State of the site
11	PROVINCE	VARCHAR2	60	Province of the site
12	POSTAL_CODE	VARCHAR2	30	Zip code or postal code of the site
13	COUNTRY	VARCHAR2	60	County of the site

## LICENSE

1	LICID	NUMBER	PK	Unique Sequence
2	PRDID	NUMBER		PRD for which the license is generated
3	KBID	NUMBER		KB line ID if it is Key bank transaction
4	SIGKEYSTRING	VARCHAR2	4000	IF License type is SIG
5	FNAME	VARCHAR2	4000	If License type is VXML or SIG Key
6	LICFILE	CLOB		If License type is VXML or SIG Key
7	KEYGENDATE	DATE		Date on which the key is generated
8	KEYGENBY	NUMBER		( IF it is IPL, then generated by should IPL.veritas.com ( will be refer as -99 or some number), otherwise contact id)
9	GENQTY	NUMBER		Generated Quantity for which license is generated
10	FULFILMENTID	VARCAHR2	30	Random generated number unique for each license key generation with '.7' appended

### 3.12 Table Specification

1	ID	NUMBER	PK	Veritas Entitlement Header ID - Sequence
2	ENTSOU	VARCHAR2(30)		Entitlement Source such as ELA/SMB/VC
3	CUSTACCID	NUMBER		Account ID will be populated from Custaccounts
4	NUMBER	VARCHAR2		Service Contract Number
5	NUMMODIFIER	VARCHAR2(120)		Renewed Service contract modifier
6	AGREEMENT NO	VARCHAR2(120)		Veritas agreement number
7	AMT	NUMBER		Contract Amount
8	BAL	NUMBER		Contract Available Balance
9	STATUS	VARCHAR2(30)		Service Contract Status and EFLEX contract status
10	TARTDATE	DATE		Contract start date
11	ENDDATE	DATE		Contract end date
12	ID	NUMBER	PK	Veritas Entitlement ID - Sequence
13	CONTRDTLSID	NUMBER		ID from contract details table
14	INSTANCENUMBER	VARCHAR2(30)		IB Instance number from ERP
15	VEMSID	VARCHAR2(11)		Veritas Entitlement ID - Unique number generated with an algorithm
16	LICSLID	VARCHAR2	30	Random Number will be generated and '.7' will appended to the random number
17	QUANTITY	NUMBER		Install Base quantity
18	ID	NUMBER	PK	Unique Sequence :VEMS_CUST_SKU_MAP_S
19	PRDVERID	NUMBER		Veritas SKU id

20	MAINTPRDVE RID	NUMBER		Associated maintenance product ( VEMS_PRD_VER_ID from VEMS_SYSTEM_PRODUCT) with base product
21	CUSTOMERSK U	VARCHA R2	240	Corresponding Customer SKU, will be entered by customer
22	VEMSCUSTAC COUNTID	NUMBER		SKU Permission to OEM Partner. Partner ID will be populated here
23	STATUS	VARCHA R2	30	Active / Not Active
24	ID	NUMBER	PK	Entitlement Line Product ID
25				
26	ENTID	NUMBER		VEMS Entitlement line id
27	PRDVERID	NUMBER		PRDVERID (unique sequence Number) from System product Table
28	STATUS	VARCHA R2	30	Status
29	CREATEDBY	NUMBER		Who Columns to tack the record insert/update
30	CREATIONDA TE	DATE		Who Columns to tack the record insert/update
31	LASTUPDATE DBY	NUMBER		Who Columns to tack the record insert/update
32	LASTUPDATE DATE	DATE		Who Columns to tack the record insert/update
33	PRDVERID	NUMBER	PK	Unique Sequence, PRDVERS
34	PRODLINE	VARCHA R2	240	Product Line
35	BASESKU	VARCHA R2	40	Item Number from ERP
36	SKU_DESCRIP TION	VARCHA R2	240	Item Description from ERP
37	PRODCODE	VARCHA R2	60	Versioned Product Identifier
38	PRODDESC	VARCHA R2	240	Versioned Product Description

39	PRODVER	NUMBER		Version Number
40	PRODSTATUS	VARCHAR2	10	Status of the product if active or Inactive
41	PRODPLATFORM	VARCHAR2	150	Product Usage Type From ERP
42	PRODTYPE	VARCHAR2	150	Product Type From ERP
43	PRODSUBTYPE	VARCHAR2	150	Product Sub Type From ERP
44	PRODUSAGETYPE	VARCHAR2	150	Product Usage Type From ERP
45	PRODENTTYPE	VARCHAR2	150	Product Entitlement Type
46	PRODEXT	VARCHAR2	150	Product Entitlement Type
47	PRODFULTYPE	VARCHAR2	150	Product Entitlement Type
48	LICTYPE	VARCHAR2	30	Type of License file it will generate
49	PRODPRICE	NUMBER		Product Variable Price only stored here
50	ID	NUMBER	PK	Unique Sequence
51	PRDVERID	NUMBER		PRDVERID of the systemproducts , the file is associated with
52	FNAME	VARCHAR2	30	Name of the file
53	FDESC	VARCHAR2	240	File Description
54	FSIZE	NUMBER		Size of the file in bytes
55	LIMITDOWNLD	VARCHAR2	1	If the download is limiting to Max number
56	DOWNLDCNT	NUMBER		Number of Download
57	CUSTACCID	NUMBER	PK	Unique Sequence
58	PARTYNO	VARCHAR2	30	Party Number from ERP



59	PARTYNAME	VARCHA R2	360	Party Name
60	ACCNO	VARCHA R2	30	Customer Account Number
61	ACCNAME	VARCHA R2	360	Account Name
62	STATUS	VARCHA R2	10	Status of the account
63	NOTIFYPRIM ARY	VARCHA R2	1	If Yes, all email communication will be sent to the primary contact only
64	SALESCHANN ELCDE	VARCHA R2	30	Sales channel Code from ERP
65	CUSTADDRID	NUMBER	PK	Unique Sequence
66	CUSTACCID	NUMBER		VEMS customer ID
67	PARTYSITEN O	VARCHA R2	30	Site Number from ERP
68	SITEUSECODE	VARCHA R2	30	Site use code such as bill_to, Ship_to
69	ADDRESS1	VARCHA R2	240	address 1 of the site
70	ADDRESS2	VARCHA R2	240	address 1 of the site
71	ADDRESS3	VARCHA R2	240	address 1 of the site
72	ADDRESS4	VARCHA R2	240	address 1 of the site
73	CITY	VARCHA R2	60	City of the site location
74	STATE	VARCHA R2	60	State of the site
75	PROVINCE	VARCHA R2	60	Province of the site
76	POSTAL_COD E	VARCHA R2	30	Zip code or postal code of the site

77	COUNTRY	VARCHAR2	60	County of the site
78	LICID	NUMBER	PK	Unique Sequence
79	PRDID	NUMBER		PRD for which the license is generated
80	KBID	NUMBER		KB line ID if it is Key bank transaction
81	SIGKEYSTRING	VARCHAR2	400 0	IF License type is SIG
82	FNAME	VARCHAR2	400 0	If License type is VXML or SIG Key
83	LICFILE	CLOB		If License type is VXML or SIG Key
84	KEYGENDATE	DATE		Date on which the key is generated
85	KEYGENBY	NUMBER		( IF it is IPL, then generated by should IPL.veritas.com ( will be refer as -99 or some number), otherwise contact id)
86	GENQTY	NUMBER		Generated Quantity for which license is generated
87	FULFILMENTID	VARCHAR2	30	Random generated number unique for each license key generation with '.7' appended

### **3.13 Test Procedures and Implementation**

#### **TESTING**

Testing plays a vital role in the success of the system. System testing makes a logical assumption that if all parts of the system are correct, the goal will be successfully achieved. Once program code has been developed, testing begins. The testing process focuses on the logical internals of the software, ensuring that all statements have been tested, and on the functional externals, that is conducted tests to uncover errors and ensure that defined input will produce actual results that agree with required results.

#### **TYPES OF TESTING:**

- Unit testing
- Integration testing
- Validation testing
- System testing
- Negative testing

#### **1) Unit testing:**

Unit testing focuses verification effort on the smallest unit of software design the module. Unit testing exercise specific paths in the module's control structure to ensure complete coverage and maximum error detection.

i) Black Box Testing: In black box testing, test cases are designed from an examination of the input/output values and no knowledge of design or code is requires.

ii) White Box Testing: There are several white box testing strategies. Each testing is based on some heuristic. White box testing strategy is based on heuristic. White box testing is stronger than other strategy, if all types of errors detected by the first strategy are also detected by the second testing strategy & the second strategy additionally detects some more types of errors.

## **2) Integration Testing:**

Integration testing addresses the issues associated with the dual problems of verification & program construction. After the software has been integrated a set of high-order tests are conducted/

The following are the types of Integration Testing:

### Top-Down Integration:

This method is an incremental approach to the construction of program structure. Modules are integrated by moving downward through the control hierarchy, beginning with the main program module.

### Bottom-Up Integration:

This method begins the construction & testing with the modules at the lowest level in the program structure. Since the modules are integrated from the bottom up, processing required for modules subordinate to a given level is always available & the need from stubs is eliminated.

## **3) Validation Testing:**

At the end of Integration Testing, software is completely assembled as a package, interfacing errors have been uncovered and correction testing begins.

Software Testing & Validation is achieved through series of black box tests that demonstrate conformity with the requirements. A test plan outlines the classes of tests to be conducted and a test procedure defines specific test cases that will be used to demonstrate conformity with requirements.

Both, the plan and the procedure are designed to ensure that all functional requirements are achieved, documentation is correct and other requirements are met.

#### **4) System testing:**

System testing is series of different tests whose primary purpose is to fully exercise the computer based system. Although each test has a different purpose, all the work should verify that all system elements have been properly integrated and perform allocated functions.

There are essentially three kinds of system testing:

i) Alpha Testing: Alpha testing refers to the system testing carried out by the test team within the development organization.

ii) Beta Testing: Beta testing is the system testing performed by a select group of friendly Users.

iii) Acceptance Testing: Acceptance testing is the system testing performed by the Users to determine whether to accept or reject the delivery of system.

#### **5) Negative Testing:**

Negative testing ensures that your application can gracefully handle invalid input or unexpected user behaviour. For example, if a user tries to type a letter in a numeric field, the correct behaviour in this case

would be to display the “Incorrect data type, please enter a number” message.

Test Case ID	Objective	Action	Expected Result	Actual Result	Status
1	Incorrect username and Password	Display error message	Error at Sign in at for wrong username or Password Message display.	Error message gets displayed.	Pass
2	Correct username and password	Redirect	Redirected to Home Page	Redirected to Home Page	Pass
3	User Authorization	Redirect to authorized dashboard	Redirected to authorized dashboard	Can redirect	Pass
4	Check whether dashboard is displaying in right manner	Open dashboard page	Dashboard should get displayed in right way	Dashboard get displayed in right manner	Pass
5	All tabs are visible to user	Open dashboard page	Tabs in dashboard should be displayed	All tabs are visible to user	Pass
6	Alignment of charts, DIVs, grids are not changed	Open dashboard page and go through each component	Alignment of component is intact.	Alignment of component is intact.	Pass
7	Check if Accounts tab is working	Click on Accounts label	details about that label must get displayed	Accounts is working	Pass
8	Check if Entitlement tab is working	Click on Entitlement label	Details about that label must get displayed accurately	details displayed were accurate	Pass

9	Check if graphs are displayed correctly	Values displayed in graph with data & visibility if legends	Graphs must get displayed correctly	Graphs are displayed to user	Pass
10	Dashboard is responsive	Open dashboard page in different devices of different size	Dashboard must get opened in device & visible according to device size	Dashboard getting opened in all devices but for small devices, it has problem of visibility	Fail
11	Check if Download tab is working	Click on Download label	Details about that label must get displayed accurately	details displayed were accurate	Pass
12	Check if License tab is working	Click on License label	Details about that label must get displayed accurately	details displayed were accurate	Pass
13	Check if Enterprise Flex tab is working	Click on Enterprise Flex label	Details about that label must get displayed accurately	details displayed were accurate	Pass
14	Check the more Options on Entitlement tab	Click on more options in entitlement tab.	More options should be displayed properly and input should be accepted	Options are displayed and input is accepted	Pass
15	Check if entitlements details are displayed when we click on Entitlement ID on Homepage	Click on entitlement ID.	All the entitlement details should be displayed.	Details Displayed properly	Pass

**CHAPTER 4**  
**USER MANNUAL**



## **4.1 User Manual**

### **Login**

1. Login to My VERITAS Portal.
2. Click Licensing Tab.
3. Portal Landing Page.
4. Select Software Download
  - 4.1. Download
5. Select Entitlement Activate
  - 5.1. Activate
  - 5.2. Download License

### **Update User Profile**

1. Login to My VERITAS.
2. Edit User Profile
3. Update Profile

## **4.2 Menu Explanation**

### **Menu Explanation**

1. User logs into My VERITAS Portal.
  - 1.1. Applications
  - 1.2. Licensing
  - 1.3. Support
2. User Clicks on Licensing
  - 2.1. Home
  - 2.2. Accounts
  - 2.3. Entitlements
  - 2.4. Download
  - 2.5. Licenses
  - 2.6. Admin
  - 2.7. Eflex
3. When use click Home, Dashboard is displayed.
4. When User Clicks on Eflex the flexera page is displayed.
5. When User clicks on Entitlements user can see all the entitlements regarding that contracts.
6. When user clicks on admin the user can monitor its sub user of the contract.

### **4.3 Program Specification**

#### **Module: View Voucher Details**

<b>Program Name</b>	<b>Constraint</b>	<b>Description</b>
View Voucher Details	The voucher number should be valid.	Displays the voucher status and other details

#### **Module: Generate License**

<b>Program Name</b>	<b>Constraint</b>	<b>Description</b>
Generate License	The Entitlement ID should be valid.	Generates a license for an entitlement for a product.

#### **Module: Create Entitlement**

<b>Program Name</b>	<b>Constraint</b>	<b>Description</b>
Create Entitlement	The address should be valid.	Is used to create and entitlement for an product.

#### **Module: User Permission**

<b>Program Name</b>	<b>Constraint</b>	<b>Description</b>
User Permission	User email should be valid.	Admin can grant or revoke permission to user.

## **Drawbacks and Limitations**

- Intermittent issues regarding network connection problem.
- Portal needs to be down when certain patching is going on server so user has to face downtime.
- As there is continuous synchronization between oracle R12 and Golden gate there might be delay in synchronization for the user may not get correct data sometimes.

## **Enhancement**

Any future enhancement not yet decided as this portal is redeveloped for the 1<sup>st</sup> use for VERITAS technologies the user will provide the future enhancements if needed.

## **Conclusion**

Working on the project was good experience. I understand the importance of Planning and designing as a part of software development. Developing the project has helped us some experience on real-time development Procedures. The project made me realize the significance of developing software for client, where the sole aim is to learn.

During the project, the real importance for following all principle of System Analysis and Design dawned on me. I felt the necessity of going through the several stages because only such a process could make one understand the problem at data stored involved in their manipulations.

Finally I can conclude that, the system has been developed for Veritas to show real time reporting dashboard. The software has been tested results are found to be satisfactory. The system is developed through SpringBoot, Angular2 and Oracle the product is implemented on Microsoft windows platform. The user has to login through first screen then he/she will get the access provide for the user, which are configured for it.

## **Bibliography**

## WEB Bibliography

- Angular.io
- <https://spring.io/>
- [www.stackoverflow.com](http://www.stackoverflow.com)
- [www.github.com](http://www.github.com)
- [www.mvnrepository.com](http://www.mvnrepository.com)



## **Annexures**

# Annexure 1: User Interface Screens

## Entitlement Screen

**VERITAS**
Help ENG

**ENTITLEMENTS**

Date Updated ▼

Product Name

Service Expiry ▼

Service Expiry

Current Month

Next 6 Months

Next 1 Year

Next 1 Year Plus

Apply Filter

Entitlement Id

Version ▼

Version

Latest

Previous

Apply Filter

TURNER & TOWNSEND GROUP LTD

Entitled Quantity ▼

Entitled Quantity

Less than 10

10 - 50

50 - 100

More than 100

Apply Filter

Product Line ▼

Service Type ▼

Service Type

Essential

Basic

Apply Filter

View 20 ◀ 1 ... 5 6 7 8 ... 40 ▶

		Product Line	Product Name	Version	Entitled Quantity	Service Type	Service Contract No.	Service Expiry	Service Status	Veritas Agreement No.	Customer Project Identifier	Action	
DEC 25, 2016	A3573154663	TURNER & TOWNSEND GROUP LTD <b>ID: 508557</b>	STORAGE FOUNDATION	STORAGE FOUNDATION ENT. HA/DRA SEALINK 10 SPAU ONPREMISE STANDARD PERPETUAL LICENSE	6.0	4	ESSENTIAL	615309770	26-JAN-2017	🚫	EEL000 54100.0	AB001243	⬇️ ⬆️
DEC 18, 2016	A3573154663	TURNER & TOWNSEND GROUP LTD <b>ID: 508557</b>	STORAGE FOUNDATION	STORAGE FOUNDATION ENT. HA/DRA LUK 1 SERVER HARDWARE TIER K ONPREMISE STANDARD PERPETUAL LICENSE	2.1	2	ESSENTIAL	615309345	30-JAN-2017	⚠️	EEL000 54100.0	AER01243	⬇️ ⬆️

**VERITAS**

98

# Entitlement Result

VERITAS Dashboard My Accounts Entitlements Download Licenses Enterprise Flex Username Help Eng

### Entitlements

Updated Date Entitlement Id TURNER & TOWNSEND GROUP LTD Product Line

Product Name Version Entitled Quantity Service Type

Service Contract Number Service Expiry Veritas Agreement Number Project ID

Tag 1 Tag 2

Less options

Turner & ... Current Month Export View 20 < 1 2 3 4 ... 40 >

Updated Date	Entitlement Id	Account	Product line	Product Name	Version	Entitled Quantity	Service Type	Service Contract No.	Service Expiry	Service Status	Veritas Agreement No.	Customer Project Identifier	Action
DEC 25, 2016	A3573154663	TURNER & TOWNSEND GROUP LTD ID: 568557	STORAGE FOUNDATION	STORAGE FOUNDATION ENT HA/DR 564LNX 10 SPVU ONPROMISE STANDARD PERPETUAL LICENSE	6.0	4	ESSENTIAL	615309770	JAN 26, 2017		EFL00054100.0	A8001243	

# Generate License

VERITAS

Help ENG

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GENERATE KEY

STORAGE FOUNDATION ENT HA/DR S64LNX 10 SPVU  
ONPREMISE STANDARD PERPETUAL LICENSE

Generated License Keys 02

Account Name: **MINTEK** Account No.: **ID: 508557**  
Entitlement ID: **A3573154663** Entitled Qty.: **4**  
IB Ref No: -- SC No.:--  
Service Expiry Date: **26-Jan-2017** VAN:--  
Project ID: --

Product Version	
STORAGE FOUNDATION ENT HA/DR S64LNX 10 SPVU ONPREMISE STANDARD PERPETUAL LICENSE	Version: 6.0
STORAGE FOUNDATION ENT HA/DR S64LNX 10 SPVU ONPREMISE STANDARD PERPETUAL LICENSE	Version: 4.0
STORAGE FOUNDATION ENT HA/DR S64LNX 10 SPVU ONPREMISE STANDARD PERPETUAL LICENSE	Version: 1.0
STORAGE FOUNDATION ENT HA/DR S64LNX 10 SPVU ONPREMISE STANDARD PERPETUAL LICENSE	Version: 5.0
STORAGE FOUNDATION ENT HA/DR S64LNX 10 SPVU ONPREMISE STANDARD PERPETUAL LICENSE	Version: 5.0
STORAGE FOUNDATION ENT HA/DR S64LNX 10 SPVU ONPREMISE STANDARD PERPETUAL LICENSE	Version: 4.2

How much of your license quantity would you like to deploy?

Comments

---

---

---

Generate

# Create Entitlement

VERITAS™ Dashboard My Accounts Entitlements Download Licenses Enterprise Flex Username Help Eng

< Back

## Create Entitlement

1 Select Address 2 Select Product 3 Review Order 4 Confirm Order 5 Order Confirmation

Note: Each cart transaction is tied to a single address/ contract combination. The selected address will be used for all products in this transaction.

### Select Address

View 20 < 1 2 3 4 ... 40 >

Address	City	State	Province/ Region	ZIP/Postal Code	Country
1920 CUSTOMER SERVICE WAY	ATWATER	CALIFORNIA	--	95301	UNITED STATES OF AMERICA
1920 CUSTOMER SERVICE WAY	ATWATER	CALIFORNIA	--	95301	UNITED STATES OF AMERICA
1920 CUSTOMER SERVICE WAY	ATWATER	CALIFORNIA	--	95301	UNITED STATES OF AMERICA
1920 CUSTOMER SERVICE WAY	ATWATER	CALIFORNIA	--	95301	UNITED STATES OF AMERICA
1920 CUSTOMER SERVICE WAY	ATWATER	CALIFORNIA	--	95301	UNITED STATES OF AMERICA

Next

### Order Status

Address

1920 CUSTOMER SERVICE WAY ATWATER, CALIFORNIA 95301 UNITED STATES OF AMERICA

## Create Entitlement

### Select Product

VERITAS Help ENG

[← Back](#)

Create Entitlement | AT & T IM Unlimited Flex

1 Select Address 2 **Select Product** 3 Review Order 4 Confirm Order 5 Order Confirmation

---

#### SELECT PRODUCT

Recent Products  SKU / Description

By Contract

Product Family

Select Product Line

View 05 1 - 5 of 10 Products

Products	Description
123894	CLUSTER SERVER HA/DR UX10 SPUCV ONPRIMISE STANDARD PERPETUAL LICENSE
24235	CLUSTER SERVER HA/DR UX10 SPUCV ONPRIMISE STANDARD PERPETUAL LICENSE
324345	CLUSTER SERVER HA/DR UX10 SPUCV ONPRIMISE STANDARD PERPETUAL LICENSE HA/DR UX10 SPUCV ONPRIMISE
466356	CLUSTER SERVER HA/DR UX10 SPUCV ONPRIMISE
123894	CLUSTER SERVER HA/DR UX10 SPUCV ONPRIMISE STANDARD PERPETUAL LICENSE

[Next](#)

#### ORDER STATUS

**Address**

1920 CUSTOMER  
SERVICE WAY ATWATER,  
CALIFORNIA 9530  
UNITED STATES OF AMERICA

**Product**

CLUSTER SERVER  
HA/DR UX10 SPUCV  
ONPRIMISE

## Review Order

VERITAS
Dashboard
My Accounts
Entitlements
Download
Licenses
Enterprise Flex


 Username
 Help
 Eng

[< Back](#)

### Create Entitlement

- 1 Select Address
- 2 Select Product
- 3 Review Order
- 4 Confirm Order
- 5 Order Confirmation

Note: Each cart transaction is tied to a single address/ contract combination. The selected address will be used for all products in this transaction.

### Review Order

**License Information**

<b>Contract</b>	<b>Product</b>	<b>Date Of Deployment</b>
<input type="text" value="LMDFUD974"/>	<input type="text" value="Cluster Server HA/DR UX10 SPUCV Onprim"/>	<div style="display: flex; justify-content: space-between;"> <div>Mar ▼</div> <div>04 ▼</div> <div>2017 ▼</div> </div>
<b>Customer Number</b>	<b>Select Version</b>	<b>Quantity</b>
<input type="text" value="87458"/>	<input style="border-bottom: 1px solid #ccc;" type="text" value="6.0"/>	<input style="border-bottom: 1px solid #ccc;" type="text" value=""/>
<input type="text" value="Recipient Emails"/>		
<b>Contract Defined Information</b>		
<input type="text" value="Finance"/>	<input type="text" value="Sales"/>	<input type="text" value="HRM"/>
<input type="text" value="Comments"/>		

Add to Cart

**Order Status**

**Address**

1920 CUSTOMER  
SERVICE WAY ATWATER,  
CALIFORNIA 9530  
UNITED STATES OF  
AMERICA

**Product**

CLUSTER SERVER  
HA/DR UX10 SPUCV  
ONPRIMISE

Confirm Order

< Back

### Create Entitlement

- 1 Select Address
- 2 Select Product
- 3 Review Order
- 4 Confirm Order
- 5 Order Confirmation

This page provides information on the products in your cart including contract balances, installation address and license specific information for each product in your cart. Please review your order details before placing your order.

### Confirm Order

Add to Cart Save Cart Place Order

**Order Details**

Customer Name (number): AT&T Services  
Contract Description: AT & T IM Unlimited Flex  
Address 1: 1401 ENEA CIR  
Address 2:  
Address 3:  
Address 4:  
City: Atwater  
State: California  
Province:  
Zip: 95301  
Country: United States of America

Delete Product

	Version	Quantity	Cost	
<input type="checkbox"/> ENTERPRISE VAULT FILE SYSTEM ARCH AND SEARCH WIN 1 USER ONPREMISE STANDARD PERPATUAL LICENSE (10919)	6.0	1	USD 41.25	

Note: The following values will be carried forward from the last product added to the cart when you add additional products. (Contract Define Fields)

Place Order



<.Back

Create Entitlement | AT & T IM Unlimited Flex

- 1 Select Address
- 2 Select Product
- 3 Review Order
- 4 Confirm Order
- 5 Order Confirmation

[Redacted form fields]

Order Details	
Customer Name (number) :	AT & T Services
Contract Description:	AT & T IM Unlimited Flex
Address 1:	1401 ENEA CIR
Address 2:	
Address 3:	
Address 4:	
City:	Atwater
State:	California
Province:	
Zip:	95301
Country:	United States of America

Product Description	Version	Quantity	Cost
[Redacted]	6.0	1	USD 41.25
Total			USD 41.25

End-User Information	
Name:	Chetan Moolky
Title:	
Company:	AT & T IM Services
Address :	555 Long Wharf Drive, 123 Main St.
City:	New Haven
State:	
Zip:	06511
Country:	United States of America
Phone:	0015551234Wxt:1
Fax:	
Email Address:	chetan.moolky@veritas.com

License Email Details	
Name:	Chetan Moolky (1500050244)
Email Address:	chetan.moolky@veritas.com

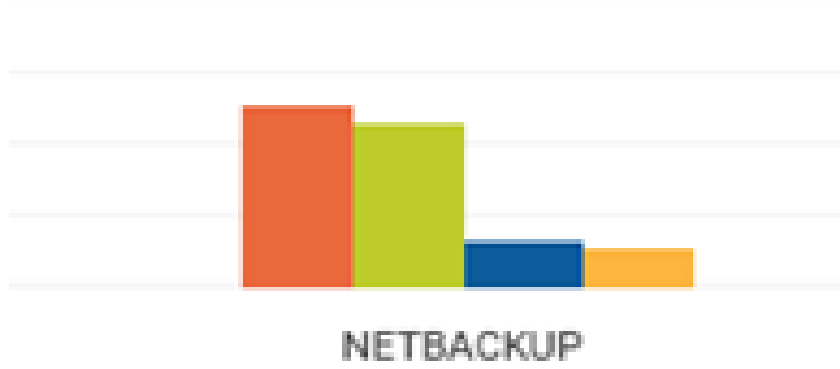
## **Annexure 2: Reports**

■ Total Entitlements   ■ Active Service Contracts   ■ Expired Service Contracts   ■ Upcoming Renewals

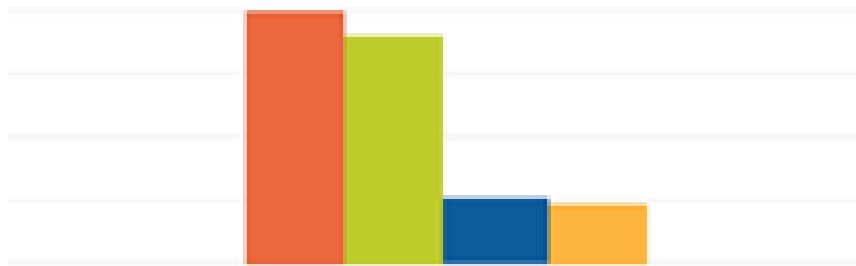
## Entitlements Dashboard



■ Total Entitlements ■ Active Service Contracts ■ Expired Service Contracts ■ Upcoming Renewals

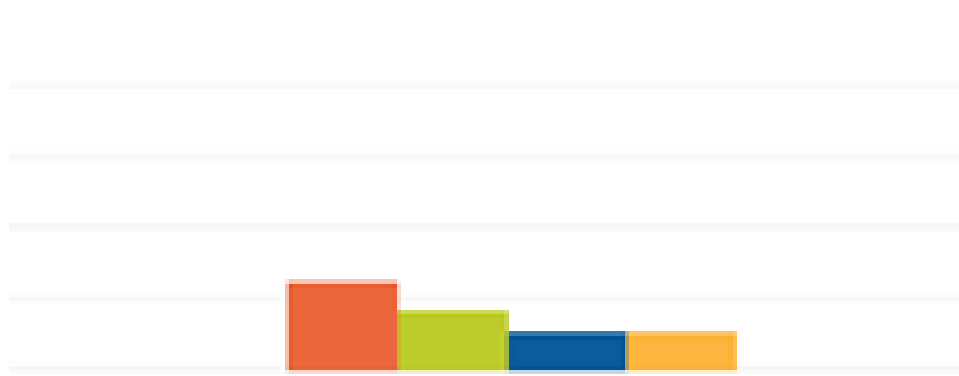


■ Total Entitlements   ■ Active Service Contracts   ■ Expired Service Contracts   ■ Upcoming Renewals



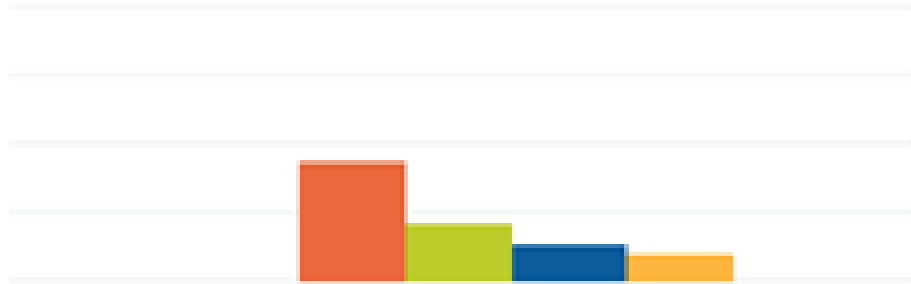
STORAGE FOUNDATION  
CLUSTER FILE SYSTEM

■ Total Entitlements   ■ Active Service Contracts   ■ Expired Service Contracts   ■ Upcoming Renewals



### STORAGE FOUNDATION

■ Total Entitlements ■ Active Service Contracts ■ Expired Service Contracts ■ Upcoming Renewals



NETBACKUP

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ENTITLEMENT DETAILS



Product Name:	<b>STORAGE FOUNDATION ENT HA/DR S64LNX 10 SPVU ONPREMISE STANDARD PERPETUAL LICENSE</b>
Account Name:	<b>TURNER &amp; TOWNSEND GROUP LTD</b>
Account ID:	<b>508557</b>
Entitlement ID:	<b>A3573154663</b>
Entitlement Quantity:	<b>4</b>
IB Ref Number:	<b>3376132</b>
SC Number:	
Service Expiry:	<b>Jan 26, 2017</b>
VAN:	
Project ID:	
Support ID:	
SC Service Type:	<b>Permanent</b>
License Expiration Date:	<b>Sep 11, 2015</b>
License Date Added:	
Sold as SKU:	<b>Commercial</b>
Sold as SKU Description:	
Appliance Serial Number:	
Order Number:	
Customer ID:	<b>EFL00141335.0</b>
Partner Account Number:	
IB Status:	<b>Created</b>
IB Termination Date:	
SC Line Status:	
SC Termination Reason:	
SC Termination Date:	
Veritas Agreement Number:	<b>EFL00141335.0</b>
Veritas Agreement Description:	<b>Euro Green Tech Unlimited</b>
Support ID:	



Contract Dashboard

Products

Reports

Contract Defined Fields

MY CONTRACTS

Balance: Unlimited  
Pending: N/A

Active Price List

ECL Price List

DBL Price List

[Back](#)

License Description: Cluster Server for OS Tier STD ED With 1 Server On-premise Standard Perpetual License

Hardware Transfer

Entitlement Details

Product(P/N):	Cluster Server for OS Tier STD ED With 1 Server On-premise Standard Perpetual License (11848)
Product Version:	
Quantity:	1
System Type:	NA
Price Tier:	NA
Comment/Version:	NA
Date Generated:	Jan 26, 2017
Entitlement ID:	AE15487258
License Key:	

Address Details

Address:	1671 ENEA CIR
City:	Omaha
State:	GA
Province:	
Country:	US
Zip Postal Code:	9920 - 9211

Entitlement History


Contract Catalogue   Products   **Reports**   Contract Defined Fields

[< Back](#)

---

Contract Description: **ENTERPRISE FLEX STANDARD/SITE LICENSE ADDENDUM A (TOTAL FEE)**

[License Key Transaction History Summary and detail Report](#)

---

[License Key Utilization Report](#)

---

[Ellex Transaction Details Reports](#)

---

**MY CONTRACTS**  
Balance: Unlimited  
Pending: N/A

[Active Price List](#)

[EOL Price List](#)

[OBL Price List](#)

Contract Catalogue   Products   **Reports**   Contract Defined Fields

[s:Back](#)

### License Key Transaction History Summary Report

Transaction Type:	Transaction Quantity
License Key Generation:	30454
License Key Retirements:	166
License Key Exchange (same product line):	0
Hardware Transfer (Same tier):	0
Hardware Transfer (Upgrade):	0
Hardware Transfer (Downgrade):	0

[Download as CSV File](#)

**MY CONTRACTS**  
Balance: Unlimited  
Pending: N/A

- Active Price List
- ECL Price List
- OBL Price List

### License Key Transaction History Detail Report

Customer Name/ Number \*  Username

Installation Address  Product Line

SKU (Partial Search Allowed)  Description (Partial Search Allowed)

Transaction Date From: Jan 10 2017   Transaction Date to: Feb 12 2017

Include in results  Select All

- License Key Generations
- License Key Retirements
- License Key Exchange (same product line)
- Hardware Transfer (Same tier)
- Hardware Transfer (Upgrade)
- Hardware Transfer (Downgrade)

[Generate Report](#)

< Back

License Key Utilization Report

Download as CSV File

View 25 41 - 5 6 7 8 - 40

Product SKU	Product Name	Platform	Number of Licenses	Amount Deployed	% of total product amount
11315	INFOSCALE AVAILABILITY LINK 1 CORE ONPREMISE STANDARD PERPETUAL LICENSE	10355 - 000000	5	\$ 541,056.01	5%
12962	CLUSTER SERVER HA DR 364 10X 11 SP4U ONPREMISE STANDARD PERPETUAL LICENSE(S)	10347 - 000000	2	\$ 191,315.78	2%
12296	CLUSTER SERVER 6640X10 SP4U ONPREMISE STANDARD PERPETUAL LICENSE	10348 - 000000	1	\$ 3,620.2	0%
14871	APPLICATION 6640X11 VM ONPREMISE STANDARD PERPETUAL LICENSE	10348 - 000000	1	\$ 13,617,963.5	113%
15048	APPLICATION 6640X10 SP4U ONPREMISE STANDARD PERPETUAL LICENSE	10348 - 000000	2	\$ 14,454,943.95	258%
11315	INFOSCALE AVAILABILITY LINK 1 CORE ONPREMISE STANDARD PERPETUAL LICENSE	10355 - 000000	5	\$ 7,005.91	0%
12962	CLUSTER SERVER HA DR 364 10X 10 SP4U ONPREMISE STANDARD PERPETUAL LICENSE	10347 - 000000	2	\$ 146,816.58	0%
12296	CLUSTER SERVER 6640X10 SP4U ONPREMISE STANDARD PERPETUAL LICENSE	10348 - 000000	4	\$ 33,316.89	25%

MY CONTRACTS

Balance: Unlimited  
Pending: N/A

Active Price List

EOL Price List

OBL Price List

## Annexure 3: Sample Program Code

### ApplicationContext.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<beans xmlns="http://www.springframework.org/schema/beans"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:context="http://www.springframework.org/schema/context"
xmlns:mvc="http://www.springframework.org/schema/mvc"
xsi:schemaLocation="http://www.springframework.org/schema/beans
http://www.springframework.org/schema/beans/spring-beans-
3.0.xsd
http://www.springframework.org/schema/context
http://www.springframework.org/schema/context/spring-context-
3.0.xsd
http://www.springframework.org/schema/mvc
http://www.springframework.org/schema/mvc/spring-mvc-3.0.xsd">

<context:annotation-config />

<!-- Scans the classpath for annotated components that will be auto-
registered as Spring beans.
For example @Controller and @Service. Make sure to set the correct
base-package-->
<context:component-scan base-package="com.veritas.mft" />

<!-- Configures the annotation-driven Spring MVC Controller
programming model.
Note that, with Spring 3.0, this tag works in Servlet MVC only! -->
<mvc:annotation-driven />

</beans>
```

**Spring-security.xml**

```

<?xml version="1.0" encoding="UTF-8"?>
<beans xmlns="http://www.springframework.org/schema/beans"
xmlns:beans="http://www.springframework.org/schema/beans"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:security="http://www.springframework.org/schema/security"

xsi:schemaLocation="http://www.springframework.org/schema/beans
http://www.springframework.org/schema/beans/spring-beans-
3.0.xsd
http://www.springframework.org/schema/security
http://www.springframework.org/schema/security/spring-security-
4.0.xsd">

<!-- This is where we configure Spring-Security -->
<security:http auto-config="true" use-expressions="true" disable-
url-rewriting="false">
<security:access-denied-handler error-page="/denied"/>

<security:intercept-url pattern="/login" access="permitAll"/>
<security:intercept-url pattern="/admin" access="permitAll"/>
    <!-- access="hasRole('ADMINISTRATOR')" -->
<security:intercept-url pattern="/common" access="permitAll"/>
<security:intercept-url pattern="/dashboard" access="permitAll"/>
<security:intercept-url pattern="/index" access="permitAll"/>

<security:form-login
login-page="/login"
login-processing-url="/j_spring_security_check"
username-parameter="j_username"
password-parameter="j_password"
authentication-failure-url="/login?error=true"
default-target-url="/index"/>

<security:session-management invalid-session-url="/login" session-
fixation-protection="newSession" >

```

```
<security:concurrency-control max-sessions="1" error-if-maximum-
exceeded="true" />
</security:session-management>
```

```
<security:logout
invalidate-session="true"
logout-success-url="/login"
logout-url="/j_spring_security_logout"/>                                <!--
/mft/auth/login?logout=true -->
```

```
</security:http>
```

```
<security:authentication-manager>
```

```
<security:ldap-authentication-provider
```

```
user-search-filter="(sAMAccountName={0})"
user-search-base="ou=people"
group-search-base="ou=People"
group-search-filter="(sAMAccountName={1})"
user-context-mapper-ref="customUserContextMapper"/>
```

```
<!-- group-role-attribute="cn" -->
```

```
</security:authentication-manager>
```

```
<bean id="customUserContextMapper"
class="com.veritas.mft.security.MyCustomAuthoritiesPopulator"/>
```

```
<bean id="initialDirContextFactory"
class="org.springframework.security.ldap.DefaultSpringSecurityCo
ntextSource">
```

```
<constructor-arg value="ldap://vldap-
prod.community.veritas.com:389/DC=community,DC=veritas,DC=
com" />
```

```
<property      name="userDn"      value="CN=mft.dev,OU=Non-Privileged_Standard,OU=ServiceAccounts,DC=community,DC=veritas,DC=com" />
<property name="password" ref="deobfuscatedPasswordFinanceui" />
</bean>

<!-- Automatically receives AuthenticationEvent messages -->
<bean          id="loggerListener"
class="org.springframework.security.authentication.event.LoggerListener" />

<bean          id="deobfuscatedPasswordFinanceui"          factory-
bean="obfuscationAdapterFinanceui"          factory-
method="deObfuscation">
<constructor-arg          type="java.lang.String"
value="978EE8B850EFDDE1E132D08D" />
</bean>

<bean          id="obfuscationAdapterFinanceui"
class="com.veritas.it.core.encryption.tools.ObfuscationAdapter">
<property          name="globalKey"
value="1C3A3259575F585A16A43A3E9B1DA12B13F3E356" />
</bean>

</beans>
```





