

Extremely effective CRM Solution Using Salesforce

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Abstract - Salesforce is very hot cloud computing technology in IT industry, which is available on cloud, no need install any software as well as no hardware required. Salesforce.com (SFDC) is a number one on demand CRM, which runs on force.com platform, as well as CRM is a model used to manage organization interactions like phone calls, Emails, Meetings and Social media with customers and also prospects penetrating to Sales, Marketing and Support. In this paper, we are discussing about Introduction to Cloud Computing, Service models in Cloud Computing, Types of Cloud Computing, Architecture of Cloud Computing and Introduction to MVC as well as SFDC MVC. Further discussing about Introduction to Salesforce, SOQL and Its Comparison Operators and at last covering Force.com IDE and CRM. The aim of this paper is to show mainly importance of Salesforce.com which is a software giant that manages to give the buyer an easy to use as well as extremely effective CRM solution.

Keywords - Cloud Computing; CRM; MVC; SFDC; SOQL

I. INTRODUCTION

Traditional business applications have always been very expensive, complicated and you need a whole team of experts to configure, install, test, run, update and secure software, hardware. You eliminate all headaches using cloud computing because you are not managing software, hardware that's responsibility of an experienced vendor.

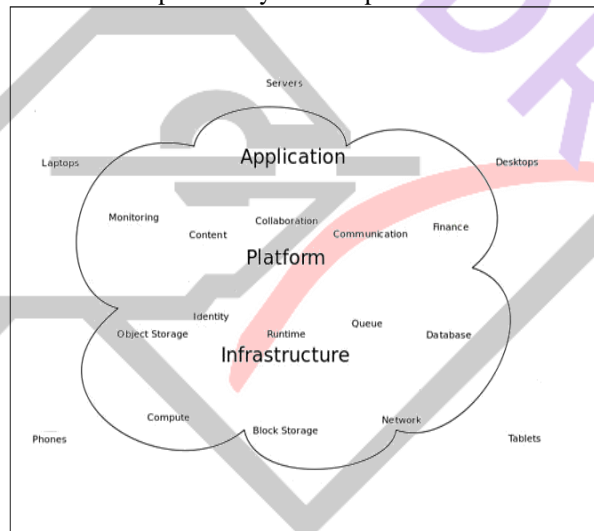


Fig. 1: Cloud Computing

New trend in IT is Cloud computing, Businesses are running all kinds of apps in the cloud, such as customer relationship management (CRM), accounting, HR and more, and with a cloud app, you just open a browser, log in, customize app, and start using it. Cloud computing means simply storing, accessing data and programs over an Internet instead of your computer's hard drive, as well as with an online connection, cloud computing can be done anytime, anywhere.

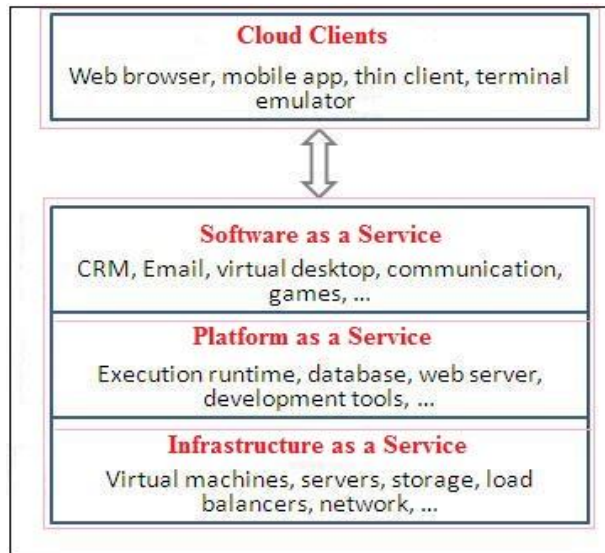


Fig. 2: Service Models in Cloud Computing

II. CLOUD COMPUTING

Cloud computing is simply a model for enabling convenient, ubiquitous, on-demand network access to a shared pool of configurable computing resources like networks, servers, storage, applications, and services that can be rapidly provisioned as well as released with minimal management effort. This cloud model is composed of some essential characteristics (On-demand self-service, Broad network access, Resource pooling, Rapid elasticity, Measured service, Multi Tenacity), service models (Software as a Service (SaaS), Platform as a Service (PaaS), Infrastructure as a Service (IaaS)), and deployment models (Private cloud, Community cloud, Public cloud, Hybrid cloud).

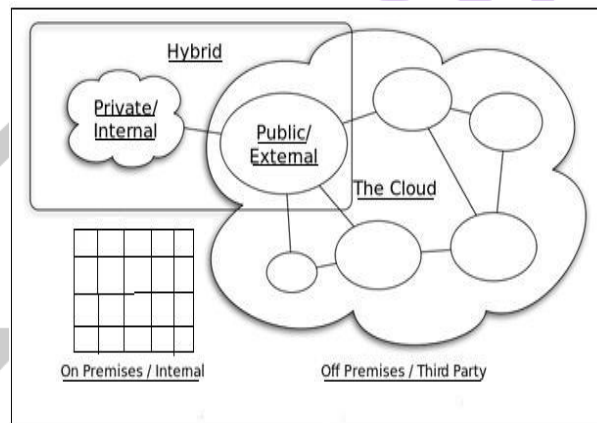


Fig. 3: Cloud Computing Types

III. CLOUD COMPUTING ARCHITECTURE

Cloud Computing architecture comprises of many cloud components, as well as each of them are loosely coupled. We can divide cloud architecture into mainly two parts like Front End and Back End, and also each of ends are connected through a network, usually via Internet.

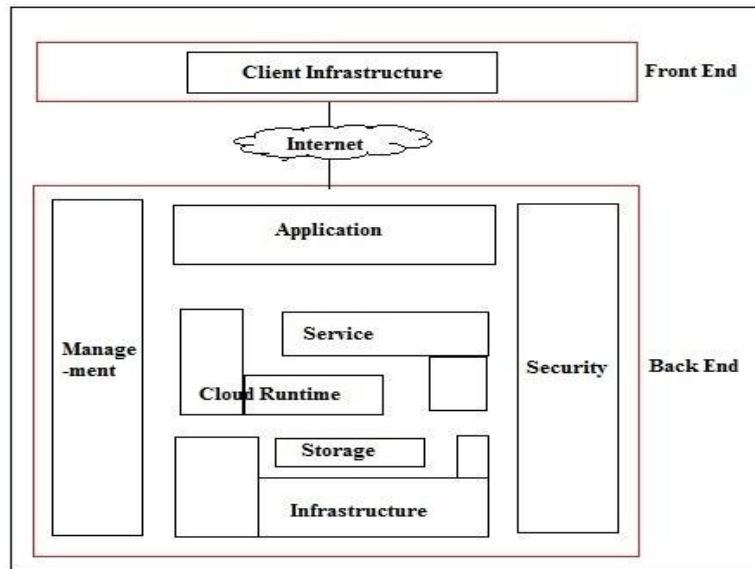


Fig. 4: Graphical view of Cloud Computing Architecture

- A. **Front End:** It refers to client part of cloud computing system, as well as consists of interfaces and applications that are mainly required to access cloud computing platforms.
- B. **Back End:** It refers to cloud itself, as well as consists of all resources required to provide cloud computing services. Back end comprises of huge data storage, virtual machines, services, security mechanism, servers, deployment models, etc.

IV. MODEL VIEW CONTROLLER (MVC)

Model view controller is a software architecture pattern that separates representation of information from user’s interaction with it. Model notifies its associated views as well as controllers when there has been a change in its state, view requests from model the information which it needs to generate an output representation, and controller can send commands to its associated view to change the view’s presentation of the model.

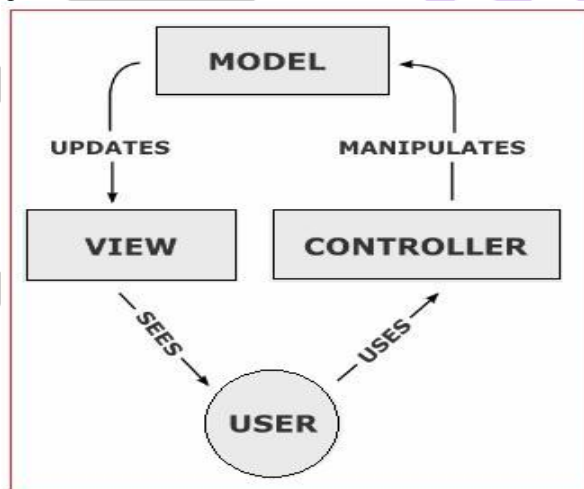


Fig. 5: Model View Controller

V. SFDC MVC

We can write our VIEW pages using SFDC visual force (VF pages), that is similar to JSP pages, as well as each VF page is associated with a Controller. You can write your own controller and Model Classes using Apex language. In SFDC, Page Layouts, Visual Force pages, Tabs comes under View Layer, Fields, Objects, Relationships comes under Model Layer, and Apex Classes, Workflows, Triggers comes under Controller part in MVC.

SFDC MVC pattern contains basically three modules like Model, View and Controller.

- A. **Model:** What schema as well as data does salesforce uses to represent system, and sObjects are model as every entity in salesforce is mapped to some subject.
- B. **View:** How schema as well as data is represented, and visualforce is used to present data to users.
- C. **Controller:** How interface actions, and Controllers are used to perform actions whenever users interact with visual force.

VI.SALESFORCE

Salesforce is a modern cloud computing technology, which is available on cloud, no need install any software as well as no hardware required. You can develop our own applications as well as need any application on demand, then you can buy from app exchange. App Exchange is a market place to sell our custom applications as well as to buy applications from app exchange easily.

Advantage of SFDC is upgrading features three times per year. Each year salesforce provide three releases such as winter, spring and summer.

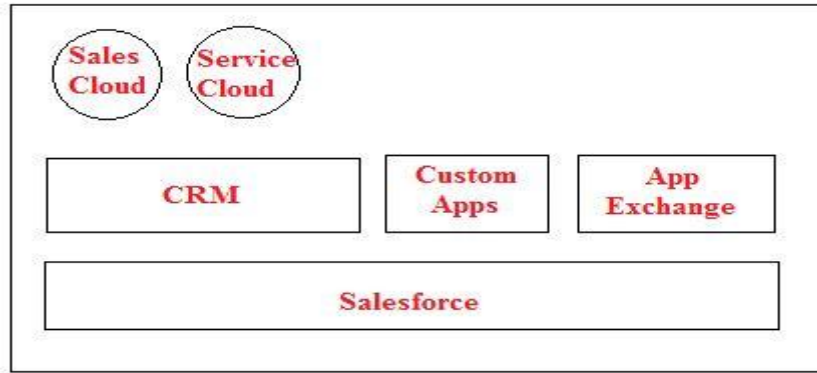


Fig. 6: Salesforce

VII. REASON FOR USING SFDC

Salesforce.com (SFDC) is a number one on demand CRM, which runs on force.com platform, as well as it reduces development cost and deliver application in short time. SFDC was officially launched in 1999 and Founded by Mark Benioff. Here, I am discussing some reason for using SFDC such as:

- It is a Number one on demand Customer Relationship Managemet.
- It uses Force.com platform that reduce development cost.
- It is good market place to sell our custom applications and also to buy applications from App Exchange.
- It is available on cloud, so no need to install software and also no hardware required.
- Salesforce Improves Customer Data Quality & Management as well as Customer Service and Support.
- Salesforce helps acquire New Customers and increases efficacy of Marketing Campaigns.
- Salesforce reduces Costs Associated with Sales, Services, and Marketing.
- Salesforce increases Customer Satisfaction, Retention, and Loyalty as well as Profit Margins.
- Salesforce improves Mobility of Business.

VIII. SOQL

We can use SOQL (Salesforce object Query Language) to build our own custom query stings, and these query strings can be used in the following places like:

1. Apex statements
2. Visualforce getter methods as well as controllers
3. In queryString param passed in query() call
4. Use Schema Explorer in Eclipse Toolkit

SOQL uses "SELECT" statement combined with any filter statements to bring back sets of data, as well as data sets returned may be optionally ordered as well (just like in SQL). Here I am showing some basic example:

```
SELECT one or more fields
FROM an object
WHERE filter statements and optionally, order the results
```

```
SELECT ID, Name from Employee WHERE email = 'rakesh@gmail.com'
SELECT COUNT() from Employee WHERE email = 'rakesh@gmail.com'
SELECT ID, Name from Employee WHERE email LIKE '%gmail.com'
SELECT BookCode FROM PricebookEntry WHERE CurrencyIsoCode = 'GBP' or CurrencyIsoCode = 'USD'
```

Table-1: SOQL Comparison Operators

Operator	Name
<	Less than
<=	Less than or equal
>	Greater than
>=	Greater than or equal
=	Equals
!=	Not equals
IN	In
NOT IN	Not in (WHERE Clause)
LIKE	Like
INCLUDES EXCLUDES	Applies to multi-select picklists

IX. FORCE.COM IDE

Force.com IDE is a client application for creating, modifying as well as deploying Force.com applications. Force.com IDE is mainly based on Eclipse platform and built on Tooling API, which provides a comfortable environment for programmers familiar with integrated development environments, letting you code, compile, test, package, and deploy all from within IDE. Force.com IDE has also features an embedded schema explorer for a live view of your database as well as metadata components. Using synchronization features of IDE, you can also create a project which lets multiple team members develop against a shared source code repository.

X. CRM

Salesforce is hot technology in IT industry and with CRM, you can easily store customer and prospect contact information, accounts, leads and sales opportunities in one central location, ideally in cloud so information is accessible by many, in real time. Customer relationship management (CRM) is a system for managing a company's interactions with current as well as future customers. CRM often involves using technology to organize, automate and synchronize sales, marketing, customer service, and technical support. CRM cloud apps need to be easy to use for sales, marketing, and service professionals in industry. An effective CRM infrastructure is based on multitenancy, and with multitenancy, you don't have to worry about application or infrastructure upgrades because they happen automatically.

XI. CONCLUSIONS

Salesforce is a great platform and, easy to use, powerful, quick as well as have good community. This paper showed in the above text, what concept of cloud computing and Salesforce is all about. After reading this paper you easily know, that Salesforce offers a conclusive concept to deliver an easy to use CRM Software as a service using a dynamic, scale free cloud computing approach. Success of Salesforce is based on an excellent management, a clear company strategy as well as a business model, which uses cutting edge technology combined with a developer community and an easy to use platform, which is delivered in a very cost effective manner, So Salesforce.com is an excellent example for an eCommerce company.

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