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Salesforce Combination of Multiple Technology

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ABSTRACT

Salesforce is a type of cloud-based customer relationship management (CRM) platform that provides connectivity to the customer and business for improving profitability. There are many CRM providers platform like – Hub-spot Sales Hub, ZOHO CRM, Fresh sales, SAP Sales Cloud, MICROSOFT DYNAMICS 365 Sales but the difference between the SALESFORCE CRM and other CRM IS Salesforce provides scalability and customization, comprehensive ecosystem, industry-specific solution, innovation and AI, mobile accessibility these differences make salesforce as a position of leader in CRM based industry, providing business with a powerful tool for managing customer or client relationship to business to their sales to grow the business of any person effectively.

Keywords — Salesforce-CRM, Cloud-Computing,Salesforce-AI tools, Dev ops

I. INTRODUCTION

Salesforce started their journey in March, 1999 contained out of a small apartment next to Marc Benioff's house, atop Telegraph Hill, San Francisco. The three men that started working in this small office along with Marc? Parker Harris, Frank Dominguez and Dave Moellenhoff. they make a poster of the Dalai Lama, Albert Einstein and two Dogs. The goal of these to create software for business to make easy the task and solve the task in a new way, to deliver software through a model known as Software-as-a-Service. This software provides best solution for those application which are based on cloud services. This completely eliminated the need of large amount of money in upfront costs, implementations that could take years and for the ongoing complexities of maintenance and constant upgrades. They make the first prototype of salesforce working within a month of development, it was basic, barebones and was modelled to a same look like Amazon.com software with tabs across the top. Amazon was something that gave Marc the inspiration to think, why can't business applications be delivered through a website that was as easy to use as Amazon.com? in JULY 1999 Marc gave their full time to development in salesforce his first task was to find an office that was as scalable as his software. Marc took an office at the Rincon Center, it had size eight thousand square feet, 10 employees are working in it, Parker was concerned. By November 1999 there were desks in hallways, people working full time in conference rooms, and by November 2000, it was time for a move to One Market Street. In 2000 salesforce officially launched in an event with theme "THE END OF SOFTWARE". In 2004 salesforce went public with its IPO, raising capital and expanding its market presence. In 2024 as of the latest update, Salesforce revenues reaching $

34.86 billion dollar and salesforce has 72000 employees worldwide [6]. Salesforce platform is a type of platform as a service that provide facility for developers to add application to the main salesforce.com application these Salesforce.com application is hosted on Salesforce.com infrastructure [7]. In Salesforce many types of Salesforces Developing like Salesforce admin, Salesforce Developer, Salesforce platform developer, Custom Developer, Integration Developer, App Developer,Salesforce Architecture etc. Salesforce Admin is a part of making and developing Salesforce application in Salesforce.com. they have pre define libraries in which it has many types of objects and predefine fields in their libraries we can make application by using those features. If we want to make Salesforce by using our idea, we first learnHTML, CSS, JAVA SCRIPT for framework on "Visual Force" to generate. I can tell you what I want make different User Interfaces by using this technology and by using "Visual Force". Force.com application is built using Apex. Salesforce Apex language is same as Java programming language. We use Salesforce Apex language in back end and use for developing Salesforce working types. In 2014, the Force.com platform had 1.5 million registered developers according to Salesforce [14]. App Exchange launched in 2005, the Salesforce App Exchange is an online app store that allows user to sell third parties apps and services. Trailhead launched in 2014, Trailhead is a free online learning platform with courses on Salesforce technologies. Salesforce, Inc. is an American cloud-based software company headquartered in San Francisco, California. It provides customer relationship management (CRM) software and applications focused on sales, customer service, marketing automation, e-commerce, analytics, and application development [15].

II. LITERATURE REVIEW

IMPORTANCE OF CRM IN BUSINESS: -

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. 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 of your computer's as well as with an online connection, cloud computing can be done anytime, anywhere. 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 [12]. 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.

III. CLOUD COMPUTING

Cloud computing is used for storing and access data on remote that are available on internet. Imagine you have a Pen-drive that keeping your documents like photos, movie, file, software, etc. [5]. far away to you Pen-drive is in your room you put them in to spacious storage on cloud or over that help access the data through the internet anywhere and anytime.

Benefits: -

Cost-Effective: - Companies can reduce costs by paying only for the services they use, following the 'Pay as you

go' principle.

Scalability: -Cloud resources can be easily scaled up or down based on demand.

Maintenance-Free: -Cloud providers handle server maintenance, updates, and security.

Accessibility: -Users can access data and applications from anywhere with an internet connection.

Types of Cloud Services:

IaaS (Infrastructure as a Service): Gives virtual computing resources like - servers, storage, networking over the internet. An IaaS cloud give you computing infrastructure as storage, servers, networking hardware maintenance and support. Resources are available as a service Services are highly scalableDynamic and flexible GUI and API-based access

PaaS (Platform as a Service): Gives a platform for developers to build, deploy, and manage applications without any infrastructure. PaaS where you can you develop, test, and organize the different application. The whole resources give in form of server, storage and networking are manage by company or a platform provider. Accessible to various users via the same development application. Integrates with web services and databases. Builds on virtualization technology, so resources can easily be scaled up or down as per the organization need. Support multiple languages and frameworks. Provides an ability to "Auto-scale".

SaaS (Software as a Service): Provide software applications over the internet. SaaS does not require any installations or downloads in your existing computing infrastructure. This eliminates the need for installing applications on each of your computers with maintenance and support taken over by the vendor. Managed from a central location Hosted on a remote server Accessible over the internet Users are not responsible for hardware and software updates.

FaaS (Function as a Service): Allows developers to run code without managing servers [12]. Cloud Computing Architecture: -Cloud Computing Architecture combination of cloud models. Cloud models have two parts: -

User Interface: - Salesforce provide us user interface facility for make good looking interfaces and application for access cloud computing tools. In Salesforce UI are predefined in Salesforce library we choose and make different-different UI for Salesforce application and websites.

Back End: - Salesforce provides us back-end facility for access interface features connectivity to server, data storage, virtual machine, security, and deployment models. In salesforce we use apex, NodeJS, SOQL for back-end process.
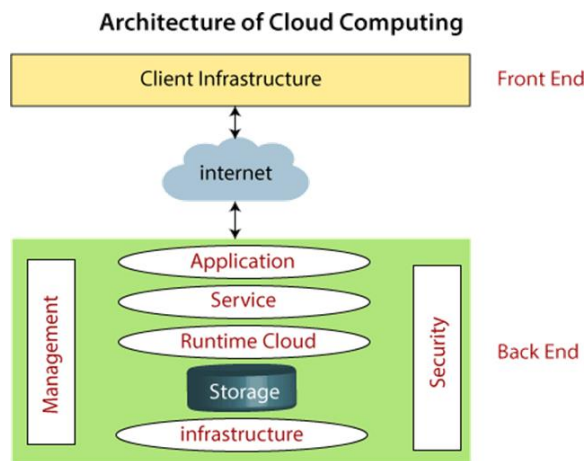
Fig.1 Architecture of Cloud

ComputingTypes of Risk in the Cloud: -

Policy and

Organizational

RisksCloud

Service Failure

Technical Risks

Interception of Data

Distributed Denial-of-

Service AttacksLegal

Risks

Data

Priv

acy

Typ

e of

clou

ds: -

Public Clouds: -built over the Internet and can be accessed by any user who has paid for the service. Owned by service providers accessible through a subscription. Many public clouds are available, including Google App Engine (GAE), Amazon Web Services (AWS), Microsoft Azure, IBM Blue Cloud, and Salesforce.com, Force.com. offer a publicly accessible remote interface for creating and managing VM instances within them proprietary infrastructure. Delivers a selected set of business processes [5]. The application and infrastructure services are offered on a flexible price-per-use basis.

Private Clouds: -built within the domain of an intranet owned by a single organization .it is client owned and managed. Its access is limited to the owning clients and their partners. Its deployment was not meant to sell capacity over the Internet through publicly accessible interfaces. Give local users a flexible and agile private infrastructure to run service workloads within them administrative domains. supposed to deliver more efficient and convenient cloud services [5].

Hybrid Clouds: -built with both public and private clouds private clouds can also support a hybrid cloud model by supplementing local infrastructure with computing capacity from an external public cloud. The Research Compute Cloud (RC2) is a private cloud, built by IBM, that interconnects the computing and IT resources at eight IBM Research Centre scattered throughout the United States, Europe, and Asia. Provides access to clients, the partner network, and third parties[5].
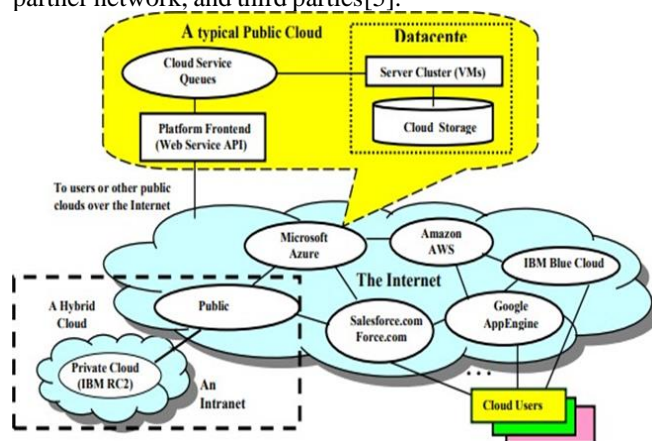

Fig.2 types of cloud

Dev-Ops

Dev Ops is a combination of Software Development tools (Dev) and Operation (Ops). Combination of Software tools for designed to increase the ability to deliver operation and services.

History Of Dev-Ops

Patrick Debois called the "father of Dev Ops", name was given in 2009" Dev Ops. in 2007 many Engineers and software are facing the problem of operation and testing problems in software and Engineer and developers are frustrated.
In 2008 a session was halt for this only one person was attending this session in this the team give huge amount of negative feedback.
In 2009 Pall Hammond and John Allspaw conduct

a lecture on "10 + Deploys a day: Dev and Ops cooperation at Flickr. Patrikwatching the streaming of this lecture at home in Belgium. Patrik found the solution of this problem and say I can solve this problem and started make solution of this problem.

In 2016 Dev ops is in a new form of high performing companies.

In 2018 a report was published on State of Dev ops the report defines the 5 stages of Dev ops that is level 0 to 5.

In 2019 the organization include more function or features and embedding Security (Dev Sec Ops) Privacy Policy, data (Dev ops) and controls in their Dev ops process [1].

Dev Ops solving problem: -
Dev ops solve many problems like: -law failure rate in new software.
Faster, minimum time in software recovery. Take minimum time in software problem fixing.Frequency of Deployment.

Principle Of Dev-Ops: -

Collaboration: - Development and operation team collaborate and give the solution and product feedback to each other in whole process of product deployment cycle and merging development and operation after process. In result give high quality.

Data Based Decision making: - it includes the information and gathering data, data delivery simple data driven solution how your idea make and increasing the productivity, scalability, reliability, and performance, measuring progress.

Customer centric decision making: - in customer centric decision-making development and operation team sharing feedback of the product to each other and in whole process of their product in which development and operation team create or make the best- and good-looking user interfaces better experiences for customer or client.

Constant improvement: - in this section dev ops team continuous improving the product and adding the more function and more features in product or in their services.

Responsibility through the lifecycle: - End to End responsibility of Dev ops team. Dev ops team monitoring and optimizing the software. Developer, tester collaborate to each other and improving the software and increasing

performance of thesoftware.

Automation: - Dev ops team automate the software lifecycle ifthat are possible. Automation in dev ops give minimum errors increase productivity and give best result. Automation include CI/CD means continuous integration and continuous deployment [4].

Advantage and disadvantage of Dev-Ops: -Advantage: -
Fast in deployment and development of software. Increasing profit and decrease the transportation time.Improve customer experience and satisfaction.
Disadvantage: -
High cost
Lack of Dev ops knowledge
Minimum availability of Dev ops workers.

Dev-ops in Salesforce

Salesforce Dev ops work same as original Dev ops that helpsdevelopment detect problems identify bugs and fix them beforereleasing. Dev ops increase the ability of teams to deliver newfeatures and find the solution of problems. Dev ops organization need to develop new function for client andworkers. They customize the service. This is the role of Dev. Working with a cloud platform like Salesforce cloud make aeasy application because Salesforce takes care of you and givenservice but Dev ops is critical for Salesforce platform.

Feedback is not an information between the both team it a wayof learning new thing and implement new idea and innovation in application and their service

Focusing on the customer and It's important to understand the value that our work delivers, so we can focus on activities that bring value and avoid things that don't.

DevOps aims to bring similar benefits to the process of developing IT applications. Just like faster searching, communication, and shipping have transformed our world, DevOps focuses on closing the gap between creative people and those who can benefit from their work [2].

four key metrics to measure the effectiveness of your development process:

Lead time: Time to deliver completed work to end users Deployment frequency: How often you

update production Change fail percentage: How often updates negatively impactend users
Time to restore: How quickly you can recover from a failure These four key metrices known as "Software deliveryperformance". This not affect the company its affect the wholeorganization. (S. & K., 2018) [4].

Fig. 3 Chart of Software Delivery

How Salesforce Dev ops Is Different: - Many people who buildwithout code on Salesforce aren't professional developers. IN Which Some are business user who combine their subject matter expertise with Salesforce skills to customize Salesforcefor their teams. These users may be less comfortable with command-line scripting and tools like Git that enable DevOps for other platforms.

Copado is an AppExchange package that helps you implement DevOps for Salesforce. Copado empowers admins, developers, and architects with a shared platform to plan, build, test, deploy, and monitor changes across teams. Copado DevOps 360 is an analytics package that gives executives and team leaders even deeper insight and governance to track progress, align teams, and enable continuous transformation and improvement [2].

Salesforce Dev ops Pillar: -
Version Control
CI/CD Pipeline
Automation
Testing
Backup
Code Scanning

Salesforce AI & Tools

Benefits of Salesforce AI: -
Improve Sales and Marketing: - Salesforce AI customer data, identify patterns and predicting behavior of buyers. Prioritize leads and close deals more effectively.
Enhance Customer Experience: - AI chatbots and virtual assistant provide support answer and solve issue.
Increase Productivity: - Workflow automation ensures timely notify task assignments and remainders this effectively boost translates fast response time and better resource.
Decision Making: - AI driven recommendation guide strategic planning helping and allocate resources effectively adapt to market dynamics [10].

Real World Example of Salesforce AI Solution: -
They are Providing GPT version for give Solution and increaseproductivity and sales.
Find the relationship between across the internet, news and report and give us more information about it they connect and give reference for us.
Create summary and identify keywords help us in where we are lacking how we are lacking and improving and checking our sales are active or not.
Make prediction using AI driven forecast backed by data and explanation identify new pattern and help us.
Automatically create email for customer using CRM
Einstein GPT for Sales: Auto-generate sales tasks like composing emails, scheduling meetings, and preparing for the next interaction.
Einstein GPT for Service: Generate knowledge articles from past case notes. Auto-generate personalized agent chat replies to increase customer satisfaction through personalized and expedited service interactions.
Einstein GPT for Marketing: Dynamically generate personalized content to engage customers and prospects across email, mobile, web, and advertising.
Einstein GPT for Slack Customer 360 apps: Deliver AI- powered customer insights in Slack like smart summaries of sales opportunities and surface end user's actions like updatingknowledge articles.
Einstein GPT for Developers: Improve developer

productivity with Salesforce Research's proprietary large language model by using an AI chat assistant to generate code and ask questions for languages like Apex [11].

IV. CONCLUSION

The main reason of writing this research paper is give few knowledge about the salesforce journey Salesforce CRM and Salesforce Cloud and give more knowledge about the many things Salesforce are supporting like – Salesforce AI and Generative AI Salesforce support give us facility for testing their project by using Salesforce Dev ops Technology they help us in find the problems in project and give reliability and scalability and increasing performance for customer and business and reduce the time and cost of product.

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