CTI INTEGRATION USING SALESFORCE.COM CRM

Avinash Parihar[1], Deepali Chorage[2], Dhanshri Bichkule[3] & Pooja Kumbhar[4]

Dept. Of Computer, NESGOI, Pune, Maharashtra, India

Abstract

Customers want to call agent for immediate help. In our project, we will show how you can add Soft Phone, called as a call-control tool, to the footer of the Sales force console so that agents can answer phone calls and update customer information in Sales force while speaking with customers. We are going to create a Soft Phone with very limited capabilities. We will have created a Soft Phone that lets agents make phone numbers clickable in Sales force, and screen pop a contact record. Later, we will point you to some resources that will help build more robust call tools. Some background on CTI: Sales force and its relative offer many options to choose from, including Open CTI, which gives you the benefits of cloud architecture and less maintenance. Sales force's online marketplace for apps. it creates a call centre for your organization third-party CTI system that integrates with Sales force. Add users to the call centre so that they can do and receive calls with a Soft Phone in Sales force.

Keywords: *CTI, CRM, Soft phone, dashboard, sales force*

Introduction:

Developing applications on Force.com platform is easy, straightforward, and highly productive. Simple changes can be implemented and deployed immediately never affecting other users in the production organization. Much complex features can be leave in development status until they have been fully tested, and then deployed to everyone in the production organization. Computer Telephony Integration (CTI) refers to the linking of computer software and telephone equipment to respond calls, accept and provide data and, in some cases, route calls to agents. At a call center , CTI can provide a screen pop, permit data about the caller to arrive instantaneously on the agent's PC screen as she answers the client call. Such value-added services have become potentially decisive differentiators in today's crowded, difficult marketplace where a premium is placed on superior customer support

.High-quality service, moreover, necessarily results in highly content customers and high levels of repeat and referral business.

System Model

Problem Statement: In call centres phones currently being used are very costly and companies need to spend huge amount of money in Installation, Configuration, Infrastructure, and Maintenance. In order to decrease this expense we have come up with cloud based CTI Adapter by salesforce.com on Salessforce1 platform.

Data Model and Description:

Data objects that will be managed/manipulated by the software are described in this section. The database entities or files or data structures required to be described. For data objects details can be given as below. CTIAdapter 1)XML 2)Web Service Web service is a method of communication between two electronic devices over network. It is important to think the project thoroughly from the beginning of the first stage towards the end of its production. Type of methodology chosen and techniques justification, hardware or software requirement and project planning will be discussed in developing of project. The success of the project will be critically upon the effort,care and skill that apply in its initial planning. The proposed project will be developed using waterfall model weather project will be constructed following the preliminary investigation phase, analysis phase and requirement phase, system design phase, development and implementation phase, system testing phase and operation and maintenance phase The suitable techniques and tools will be selected to implement in the development process .Work breakdown structure will be used as a technique to decompose the project into phases, activities and tasks to perform an easier and sequential step of project development .System testing will be performed from time to time and optimal solution will be selected from many alternatives available to solve the arise problems.
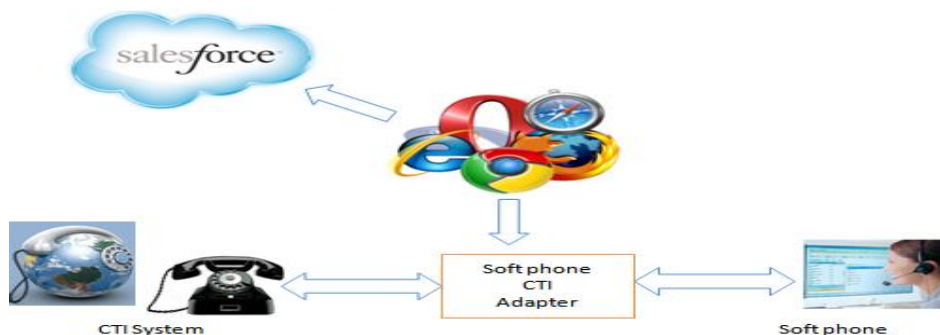
Architectural Design:

Fig 1. Architecture CTI Integration Using Salesforce.Com

CTI System

A set of telephony software and hardware that supports integration with other computer systems. The CTI system provides the base computer simulation for the calls that are made and received through a Soft Phone CTI adapter A lightweight software program that controls the countenance and behaviour of a Sales force Soft Phone. The adapter acts as an intermediary between a tertiary computer telephony integration (CTI) system, Salesforce, and a Sales force CRM Call Center user. It must be set up on any machine that needs approach to Sales force CRM Call Centre functionality. The source of call-related data and SoftPhone order instructions. In addition to providing access to records that are related to an inward call, Salesforce stores call center connection information and directories, SoftPhone layouts, and automatic call logs.

Sales force:

The source of call-related data and SoftPhone layout instructions. In addition to providing access to records that are related to an incoming call, Sales force stores call centre connection information and directories, Soft Phone layouts, and automatic call logs.

SoftPhone:

A customizable call control tool that appears in the sidebar of every Sales force page. A Soft Phone requires a concatenation to a third-party CTI system to make or receive phone
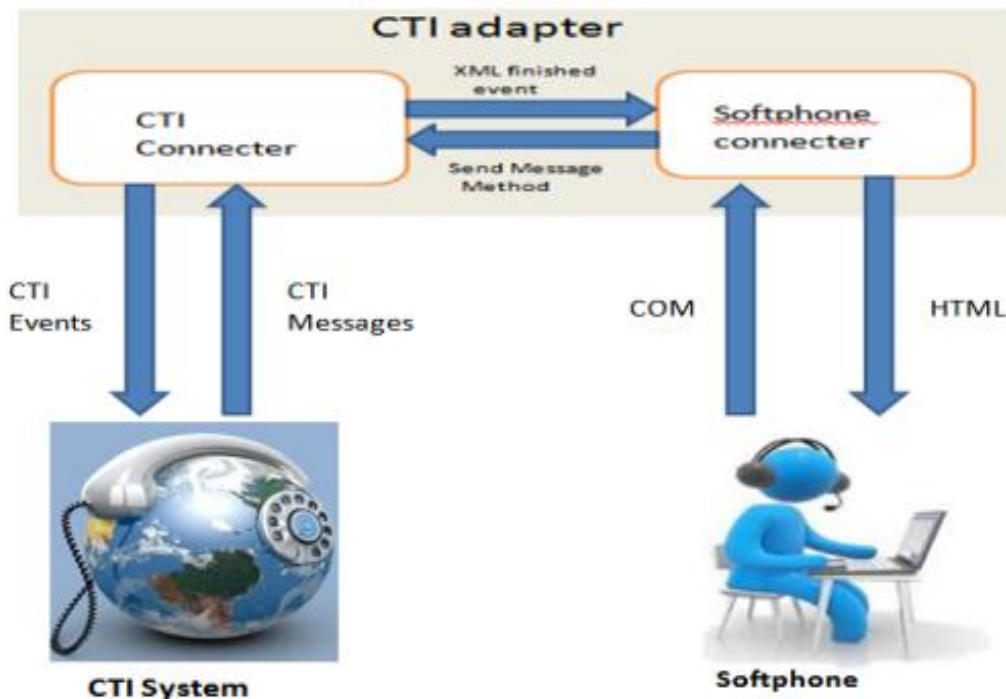

Fig 2. CTI Adapter

CTI Adapter

CTI connector receives call center user command messages from the Soft Phone connector. These messages arrive formatted in XML and are received by the UI Parse Incoming XML Message method of CCTI User Interface. This method parses the incoming command message into a command ID and a set of parameters, and then passes the data to its UI Handle Message method. UI Handle Message routes the command message to the proper handler based on its command ID.

Modules

Modules in the System

1. Account Management

2. Case Management

3. Intelligent Transfer

4. Intelligent Answering

5. Intelligent Call Routing

1) Account Management

In the account management module it is nessesary to manage user's account to for storing the details of the individual user. And maintain the relationship with the account.

2) Case management

In the case management module User will register their cases regarding with his Queries and cases will stored associated with individual user. Individual user can register multiple cases and case management can be handle by using Knowledge based articles functionaity which is provided by salesforce platform.

3) Intelligent Transfer

In this module Call transferring functionality can be handle. With CTI system. If the Qureries of the Users are very difficult to solve with associated agent can transfer the call to the other knowledgeable agent.

4) Intelligent Answering

Upon logging in to Salesforce, the browser acquires a session ID that authenticates the user for the duration of their Salesforce session. The CTI adapter uses this session ID to query Salesforce for information related to the user's assigned call center. All data associated with the call center is returned to the adapter

5) Intelligent Call Routing

In this module Incoming calls and out going calls will be routed through the CTI adapter. A CTI adapter, the Salesforce CRM Call Center component that acts as alistener, receives this event and updates the SoftPhone as appropriate

Result

This This section describes the technologies used for developing the Android based mobile phone application for task offloading. Android is a platform developing and deploying android based applications on mobile devices and processing of that application is done on cloud server. Internet has its own benchmark as a wireless communication technology for permanent and itinerant devices. Here we combining the power of cloud processing and mobile devices and this technology used for smartphone for saving battery life and improved the performance.It reduces the cost of hardware as well the mobile which is not able to run some high configure application can run those application on cloud

1) Speed up salespeople, customer service agents, and slow call center system.

2) Spend less time clicking around and more time selling and helping customers.

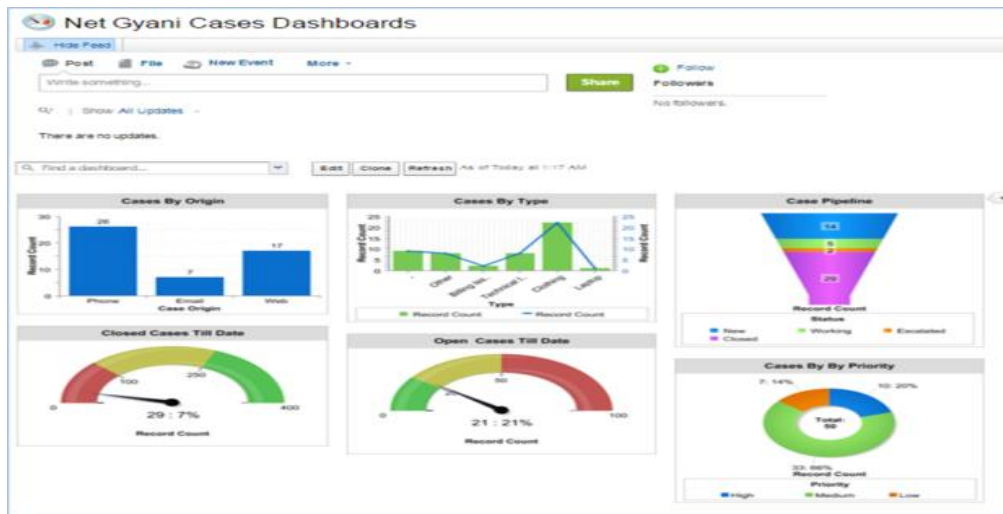3) No expensive hardware or software needed - It runs entirely on demand integrated whit web browser

Fig 3. Dashboards

Conclusion

In call centers phones currently being used are very costly and companies need to spend huge amount of money in Installation, Configuration, Infrastructure, and Maintenance. In order to reduce this cost we have come up with cloud based CTI Adapter by salesforce.com on Salessforce1 platform. Salesforce CTI helps center in an advanced VoIPtelephony system that connects with your Salesforce instance. Speed up your salespeople, customer service

agents. Spend less time clicking around and more time selling and helping customers. No expensive Software or hardware needed It runs entirely on demand integrated into your web browser.

References

Storage Service " IEEE network,vol 24,no 4, July – August 2013,pp 56-62. 1] Ming Li et.al., "Toward Privacy-Assured and Searchable Cloud Data

Christian Huitema et al."An Architecture For Residential Internet Telephony Service", IEEE network May-June 1999 ,pp 73-82.

Sheng-Lin Chou et al. "Computer Telephony Integration And Its Applications" IEEE network ,vol 3 no 1,First Quarter 2000,pp 1-11.

Anisimov, et.al. "An Approach to Design Distributed CTI Applications Using Petri Nets: An Example of a Call Center" IEEE Conference vol 1,11-14 Oct 1998,pp 238-242.

Dawei Jiang et al. "Toward Scalable and Efficient Data Analysis on Large Clusters", IEEE network vol 23,n0 9,Sept 2011, pp 1300-1308.

Jong Yul Kim et al. "Cloud Support for Latency-Sensitive Telephony Applications" IEEE network vol 1,2-5 Dec 2013,pp 421-426.