

Cloud Based Live Agent for Web Chat with Smart Routing

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ABSTRACT

Now a day most of the organizations tend to communicate with their customers in real time. Live Agent application will help service organizations connect with the enterprise customers in real time through a textual live chat. This project is for developing Live Agent application according to the high end business needs. Across the Customer Service industry web chat is becoming a popular channel to connect with the customers (and prospects). According to Forrester's, Live Agent, a native Salesforce tool provides the ability to efficiently interact with web site users. Once we have an active deployment of live agent, organisation will be able to interact with site visitors in live time. The information collected during the chat can then be saved into Salesforce cloud instance and reported on for evaluating progress and finding areas that need improvement. This will prove to be a great way to get valuable user feedback and will help organisations to take faster, better and smarter decisions using reports and dashboards.

Keywords : Live Agent, Salesforce, Customer relationship management, Real time analytics, Chat.

1. INTRODUCTION

Online chat refers to a form of communication using internet to send and receive text messages. Text messages are generally small which makes them easy and faster to read and reply can be responded quickly. Organisations can benefit themselves by using online web chat to help their customers facing issues in products, shopping, services, etc. It provides customers immediate and personalised access to help. Though queries can be resolved using other communication medium like phone, SMS, social media, apps, post also but studies have shown that live chat has the highest satisfaction rate for any customer support service channel with 73%, compared with 61% for email, 53% for apps, 50% for post, 48% for social media, 44% for phone and 41% for SMS. Customers appreciate the speed of response. In general the average waiting time to get a response for the first time after requesting for help from support agent for live chat is 24 seconds as compared with 17 hours for email, 11 hours for social media and 56 seconds for phone.

It can save both employee time and cost of interaction between agent and customer using phone. It can efficiently allow live agent to handle multiple chats rather than answering only one call at a time using phone. It increases sales benefit to the organisation because now they can easily rectify faulty products using chat statistics.

Live Agent is a native Salesforce tool which lets service organizations connect with enterprise customers in real time through a text-based live chat. Live Agent can be customised to create a personalized chat experience for customers and service agents. Across the Customer Service industry web chat is becoming an even more popular channel to engage with customers (and prospects). The system will help organizations to deliver valuable data about customer behaviour, location, and devices on customer support websites. An agent can quickly assist a disgruntled customer via chat before the issue escalates or moves up to more public medium like social media—with voice or email support, this opportunity could be lost. [1]

Live chat will give an organisation edge over others as they will be able to solve their customers issues in time and this will help them in maintaining their relations with customers. Live chat provides immediate access to customer's pain points. As live agent will communicate to customers he will find ways to improve organisation's products and services. The higher officials of an organization will be able to make a faster and better decisions, track progress and improvement depending on number of chats received i.e. number of issues faced on a particular product. The number of chats received will show the statistics of faults, the more the number of faults the more that product needs attention.

2. LITERATURE SURVEY

Clouds provide direct access to IT resources one can just access as many resources as and when one needs, and never have to deal with the difficulties and issues of handling all of the essential mechanisms that provide those resources.[4]

2.1 Multi-tenancy

Multi-tenancy is the technology that various clouds use to share IT resources cost-efficiently and securely. Just like in an apartment—in which many occupants cost-efficiently share the common infrastructure of the building but have walls and doors that give them privacy and security from other tenants—a cloud uses multi-tenancy technology to share IT resources securely and efficiently among multiple applications and *occupants* (businesses, organizations, etc.) that use the cloud. Few clouds use virtualization architectures to isolate occupants; others use custom software architectures.[3]

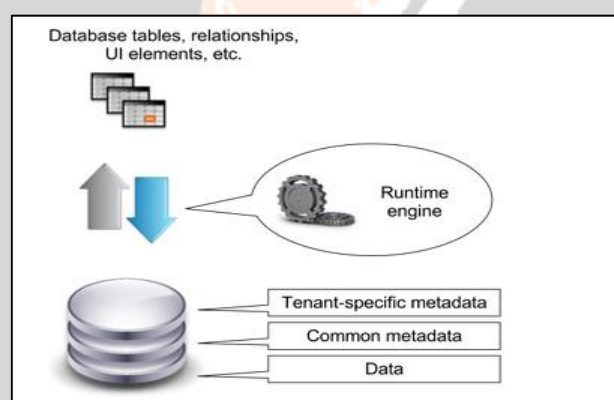


Fig 1 Multi-tenancy

2.2 Multi-tenant field history

With just a few mouse clicks, Force.com provides history tracking for any field. When an occupant enables auditing for a specific field or part, the system asynchronously records information related to the modifications made to the field (old and new values, date change, timestamp etc.) using an internal pivot table as an audit trail.

Live Agent, a native Salesforce tool provides the ability to efficiently communicate and interact with web site visitors. Once you have actively deployed live agent, you will be able to chat with the website visitors in real time. The information collected during the chat can be saved into Salesforce instance/log and reported on. This is an effective way to get proper user feedback and simultaneously provide a much needed support to people navigating the website.

You can get started with Live Agent by initially contacting Salesforce.com to setup a particular instance of Salesforce with Live Agent. Live Agent is also available with an additional cost. Once Live Agent is enabled for organization, will be able to view the succeeding Live Agent alternatives in the start-up menu.

Once the button is enabled we can test it out by first logging into the Salesforce and navigating to the service console. One has to be active in order to get an incoming chat. Once the chat has completed search for the Chat Transcript in Salesforce. Chat transcript stores the details of each chat. The Chat Transcripts are customizable and may be summarized in Salesforce reports.

- **Lead Assignment Rules**—state how leads are allocated to users or queues as they are created manually, took from the web, or introduced using the Data Import Wizard.
- **Case Transfer Rules**—Determine how cases are allocated to agents or put into queues as they are generated manually, using Web-to-Case, Email-to-Case, On-Demand Email-to-Case, the Self-Service portal, the Customer Portal, Outlook, or Lotus Notes.
- In reports data displayed is as per running user's security access. Reports can be executed on both standard and norm objects. Reports are stored in folders. Users with entrance to these folders can execute the reports. Reports data is always produced in real time. When a report is saved, reports formation parameters are saved- but the produced data is not saved.

There are four types of reports :

- **Tabular report.** This is the most elementary report. It shows just the row of records in a tabular format with grand total. Tabular reports cannot be used for generating dashboards.
- **Summary report.** This is the most normal type of report. It allows combination of rows of data. It supports sorting and displaying subtotals. For example in a recruiting application, a brief report could be used to show open positions classified by department name.
- **Matrix report.** This is the most intricate report format. Matrix reports summarize information in a grid format. Matrix reports allow let the records to be grouped using both columns as well as rows. Summary and Matrix reports can be used to generate dashboards.
- **Joined Reports**

Summary and Matrix reports can be used to generate dashboards .

Dashboards are graphical depiction of reports. Dashboards can be created for summary or matrix reports (and not for tabular reports). Dashboards display data as per the previous time report was executed. There are five type of dashboards

- Chart Used for comparisons
- Table which is good for showing top five, and bottom five lists.
- Gauge Used to show advancement towards a goal
- Metric displays a single number as value .
- Visual Force page is used to take and show data from other sources .

2.3 Force.com Platform

Force.com is a pre eminent cloud application development platform used today, supporting more than 100,000 organizations and 220,000 deployed applications. Many enterprises and commercial *Software as a Service (SaaS)* vendors trust this platform to deliver robust, reliable, and scalable applications .To meet the high demands of its large user population , Force.com has a metadata-driven software architecture that enables multitenant applications. This paper explains the technology that makes the Force.com platform fast, scalable, and secure for any type of application.[2]

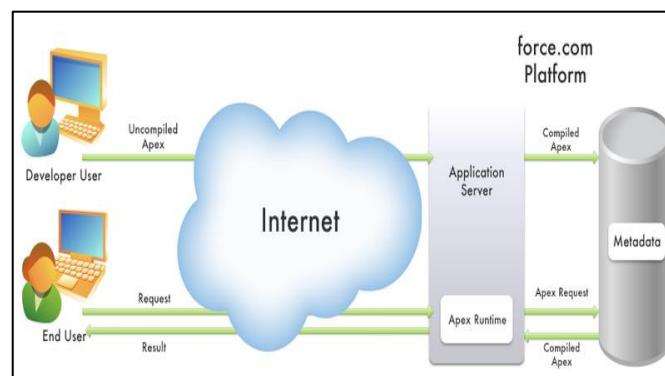


Fig 2 Working of force.com platform

Force.com combines several different persistence technologies, including a custom-designed relational database schema, which are innately designed for clouds and multi-tenancy no virtualization required. Force.com is a proven reliable, and secure cloud application development offering today that serves:

- 100,000+ businesses
- 220,000+ deployed applications
- 3,000,000 users
- 130,000,000,000 transactions per quarter, often with 2,000,000,000+ transactions per day
- An average request response time of less than 300 milliseconds .

3. FUNCTIONALITY OF THE SYSTEM

Our system will provide functionality for online chat with the live agent so that the customer of organization can get their queries resolved in real time and this will improve the relationship of the organization with their customers.

The organization officials can see the real time reports and dashboards of cases which will help them to take faster and better decisions , track progress and improvement.

3.1 Working of proposed system

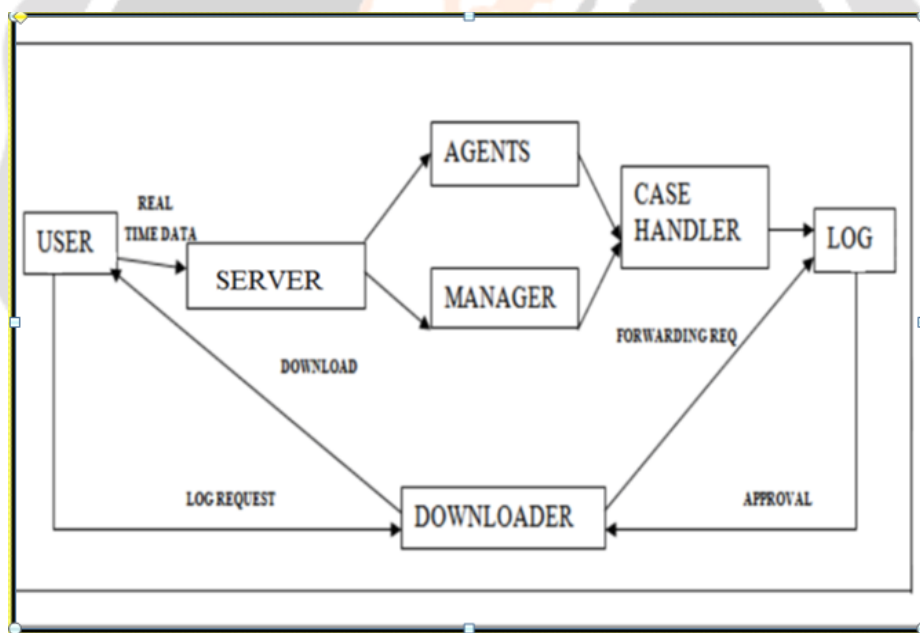


Fig 3 Working of proposed system

First of all we will add feature licence called “Live Agent User” in salesforce organization . Every employee in the organization has his unique profile .Depending on the profile of employee he will be granted access the data . Agents will be given access to see previous records,, problem solution templates , add cases , update them escalate them , import them etc. Agent will login in his account .He will see service cloud console and will either make him available or unavailable for chat. Customer visiting the website will be able to chat.

As soon as the customer submits the query, effective agent will get a pop up to accept or reject the query. If he accepts either he will open new case record for case creation or will import the details. Agent will now chat with the customer .In case he does not accept the chat then that chat will get routed to next free agent within 30 seconds or as specified . Agent should be capable of handling multiple chats at a time and also we can increase

or decrease the maximum number of chats the agent can be allotted to . Either agent or customer can end chat. Once agent ends the chat, chat transcript will be automatically email to the customer or he can download it .

Depending on number of cases generated,, solved , pending , escalated , reopened reports and dashboards will be generated. Agents as well as managers will be able to see reports and dashboards on daily/weekly basis. Higher officials as well as managers will be authorised to see dashboard i.e. graphical representation of report on salesforce. System administrator will be able to grant access rights to the personal information based on agent profile to an application data like cases, contacts, chat transcripts, session information for read, write, and update operations.

System will allow tracking and configuring changes. Every single change done to the system, record updating, deletion, insertion will be entered into logs for future reference. System will allow import, export, and update, exports all Data for database to agent and managers.

System will allow to schedule reports and email them to specified users. System will allow use of application by multiple users so that efficiency and productivity of work can be increased. System will also allow data backup and recovery .

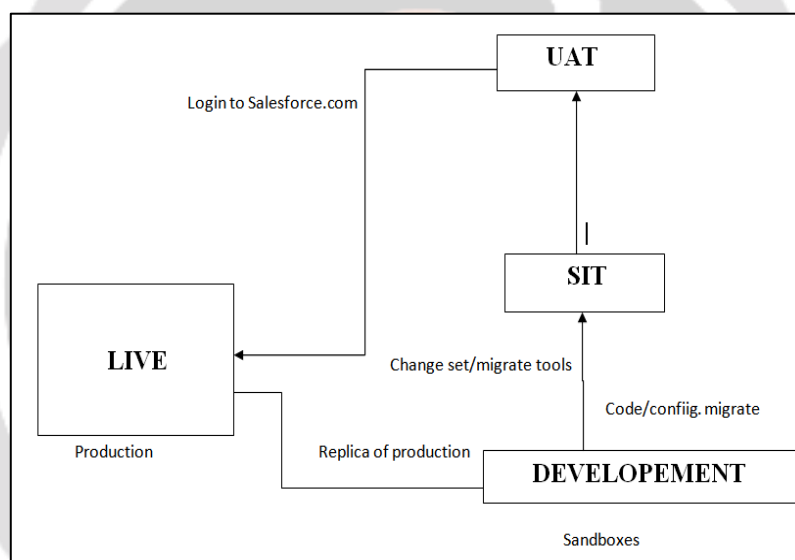


Fig 4 Flow of proposed system

In Salesforce we have two different platforms, sandboxes and live instances. Every application is first developed , tested , edited etc on sandboxes and after that it is deployed on live instance for use by customers.

Development : In this phase the overall system development is done on a sandbox which is a dummy platform. Development will be done unit wise.

SIT (System Integration System): Here all the modules of the system are integrated together and the working of it is tested.

UAT (User Acceptance Testing): The entire system is then tested from user's point of view . The whole system will be approved only if the working is done as per the expectations and requirements of the end user.[5]

Live: Live is the real live platform where the entire system that has been tested will be deployed.

4. CONCLUSION

4.1 Personalized, real-time help online.

Engage your customers and prospects online in real time. Deliver answers quickly, and say Hello to your future customers. Initiate a personalized live chat, based on how a customer or prospect is engaging with your site. With multilingual support live chat can be delivered for different branches and services of organisation across the globe.

4.2 Connected agents, higher productivity.

By connecting each live chat with the complete customer profile, answers can be delivered with complete focus on the overall customer experience. Chats can be quickly routed to the of that subject and agents can provide answers faster with a sneak peek to customer chat and keyboard shortcuts to pre-written messages. Templates can be prepared for this and they will be readily available for use by agent. Sneak peek will help agent to find what customer is writing before the customer sends it to the agent . With this he will be prepared for the answer.

4.3 Build a smarter team.

With Live Agent, you can train agents in real-time chat. You can monitor agent chat queues to balance workloads to maximise productivity. But beyond that, you can also evaluate the full history of an agent's performance by checking number of chats handled by him throughout the given time. Your team will be working faster and smarter. Every chat done will be stored on the cloud and agent can't deny sending it. Customer will be able to download the chat transcript as a proof of reply.

4.4 Deliver always-on customer service.

Give your customers the answers they need , when they need it. Today's customers expect to have access to customer service immediately and on their terms too. This means providing them with a variety of options with 365/24/7 support.

4.5 Real Time Analytics

Dashboards offer a real-time picture of complete business at one place. You will be able to dig deeper with detailed reports and access your reports and dashboards from anywhere .You can see number of chats , time spent by agent on each chat , number of chats according to any criteria , max number of chats acknowledged by agent etc.

5. REFERENCES

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