Conglomerate Information Service using Paravirtualization

Dr.R.Subhashini	Vijayabaskaran . PS
Professor & Head, Dept. of IT, Sathyabama University, Chennai.	PG-Scholor, Sathyabama University Chennai.

ABSTRACT *From ancient days, people always prefer traditional way of services. Instead of Changing or creating awareness to the people, technically we are going to enhance the way of accessing the e-services. Despite the arrival of upgraded technologies in Internet & e-services, still people tend to use orthodox services instead of e-services. Technically, this system addresses all the problems in the e-services that should be enhanced in a user-friendly manner. The goal of our system is to provide enhanced integrated e-services for both educated as well as average users. This integrated e-service represents all the services in a multidimensional hierarchy. The e-services of the various government departments will be integrated in well organized using cloud paravirtualization. In our service the user can utilize all the online instructions, procedures, Feedback, help services and mailing facility etc., in a precise manner. Our system completely reduces the user load of searching the specific services.*

1. INTRODUCTION

The main view of this paper is on the e-services of Government of Tamil Nadu i.e. the official Tamil Nadu government web services. The objective of the project is to satisfy the goals of active promotion and implementation of ICT solutions in government services. The proposed e-services will change the way people access the public services with which a common man get all the information's such as quick processing of land records, online registration, education, employment, sports and so on. Currently all the government services are available in separate websites. Hence it is time consuming for the common people.

Web-based collaborations and processes have become essential in today's business environments. [2]. Cloud computing is that resource providers offer elastic resources to end users. In this paper, we intend to answer one key question to the success of cloud computing: in cloud, can small-to-medium scale scientific communities benefit from the economies of scale? [3]. The membership service is able to manage a large system and the cost to change the system membership is low [4]. Text clustering is an established technique for improving quality in information retrieval, for both centralized and distributed environments. The proposal retrieval technique is used for various searching methodologies from the huge amount of databases [5].

2. RELATED WORK

In India various websites are available for public services. Still these websites find some difficulties in accessing the required information for the normal users. It has various shortcomings such as no regional language in the website, links directing to various fields are repetitive and display errors, come of the links do not provide accurate information to the users and are also inactive. Migrating IVR applications from one platform to another platform are huge and involve lots of risk [13]. VoIP (Voice over Internet Protocol) is a growing technology during last decade [14]. Traditional contact center has experienced some different periods such as circuit exchange, sound mixture, PBX-ACD, CTI (Computer Technology Integration) and so on. Besides, cloud contact center provides standard data interfaces and structures to receive different applications, such as voice, video, fax, Email, social media and web application, which can form an integrated platform for all medias with bidirectional input and output services [15].

Cloud computing is the long dreamed vision of computing as a utility, where users can remotely store their data into the cloud so as to enjoy the on-demand high quality applications and services from a shared pool of configurable computing resources [9]. In our setting, external sources push append-only data streams into the warehouse with a wide range of inter arrival times [7]. The increasing network bandwidth and reliable yet flexible network connections make it even possible that users can now subscribe high quality services from data and software that reside solely on remote data centers. [12].

3. SYSTEM VOERVIEW

This Conglomerate information service is on the renovation of the existing government websites with some technical enhancements in the e-services. Our proposal delivers a Multidimensional hierarchy of services in a clear, concise, brief, flexibility & reliable manner.

The proposal information systems are analyzed from several perspectives as regards users and usages, data contents, and technical, organizational, and legal aspects. The present government websites offers regional language selection in terms of PDF files, which annoys the user. Instead the whole website is translated to the required language. The system can be strengthened by providing with CLOUD-IVR (Interactive Voice Response) to give immediate response to the people through phone and GIS (Geographical Information System) systems to make people to case to locate some services in an enhanced way.
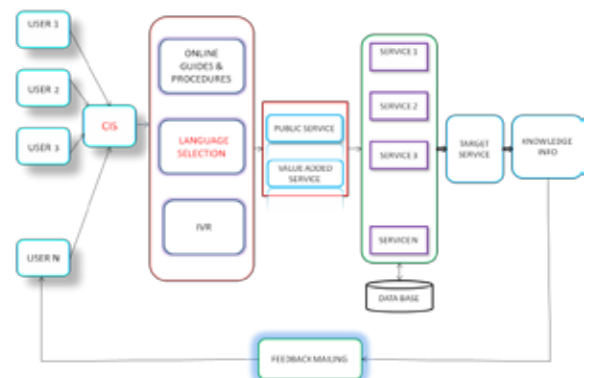

Fig. 1 Overall architecture diagram of CIS

4. INTEGERATED E-SERVICE

Integration of all the government services in the official website makes a user friendly environment. This integration provides the way to co ordinate all the e-services in a single circumference and makes an effective platform to reach their necessities. With an integration and virtualization design idea, cloud contact center has built a unique & unified cloud platform based on IP cloud and computing cloud and the platform implements the interconnection by the standardized control and interactive data interfaces. Here each and every service must be stored in separate cloud storage server virtually. Hence the user accesses their conglomerate service in a efficient manner. This methodology can be achieved via using cloud paravirtualization.

Storage Virtualization

Modern businesses live and die by the ability to effectively capture, store and utilize data. With the accelerating pace of data growth, simply adding disks is no longer enough [8]. Cloud storage virtualization solutions can help you keep ahead of storage demands with a proactive and integrated approach to storage infrastructure management.

This storage virtualization unlocks "logical" volumes from physical locations, making information more readily available to all services across the infrastructure. Server virtualization gives you the flexibility to define and deploy virtual servers almost instantly.
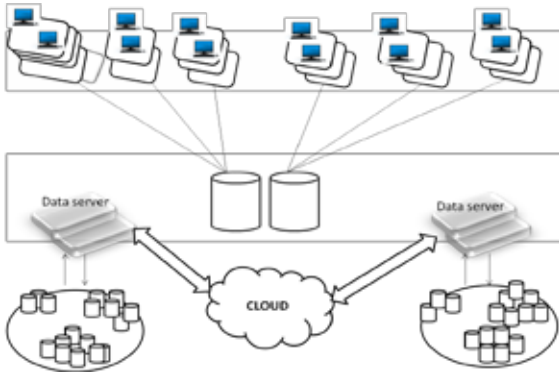
Fig. 2 Cloud Virtual storage

An interesting twist on virtualization is paravirtualization. Paravirtualization can also introduce significant support and maintainability issues in production environments as it requires deep OS kernel modifications. They are minimal, on-intrusive changes installed into the guest OS that do not require OS kernel modification.

The open source Xen project is an example of paravirtualization that virtualizes the processor and memory using a modified Linux kernel and virtualizes the I/O using custom guest OS device drivers. It can take advantage of host device capabilities to offer improved throughput and reduced CPU utilization.

5. INTERACTIVE VOICE RESPONSE

Interactive Voice Response (IVR) systems allow callers to interact with the communications system over the telephone. IVR is used to enable the caller to retrieve information from a database, enter information into a database, or both.

The idea was that if you could cluster the majority of telephone based contacts with the customer in a single depart-

ment you could have people focused just on call-related services. DTMF signals (entered from the telephone keypad) and natural language speech recognition interpret the caller's response to voice prompts. Based on IP cloud and cloud computing, the system can complete signaling controlling and transiting of voice carrying signaling.

Cloud Telephony

Cloud Telephony is an on-demand voice services provided by a hosted, dynamically scalable, often virtualized, deployment of voice infrastructure that can manipulate inbound and outbound calls. Cloud Telephony or bringing IVR to the web world, has given a new and fresh lease of life to the aging world of IVR!

The heart of the KooKoo platform is a simple request response model. Your web application requests the platform to perform a specific action like play some text, collect some user input or record user voice etc. KooKoo performs the action and responds with a result if a result exists.
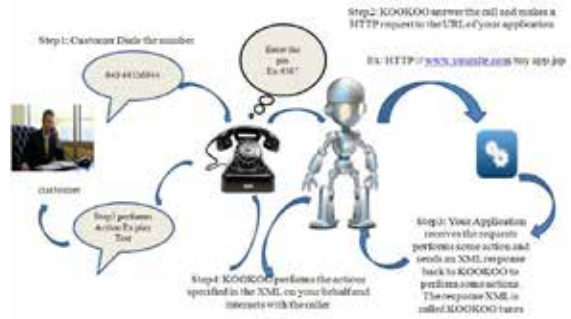
Fig.3 Cloud Telephony Model.

KOOKOO is the simplest and easiest way to build telecom application especially CLOUD –IVR. The best way to think of KooKoo is as just another web page in your application. Only difference is, the web page is accessible from the phone rather than the browser. KooKoo platform is a simple request response model.

6. Value Added Service

VASs are integrated services which provide all sorts of emergency needs in addition it coordinates both public and private sectors so that users can obtain their needs at that instant they wanted. The term is utilized widely in a number of industries, most notably telecommunications. Value added services are often introduced to customers as ancillary offerings that center around.

7. CONCLUSION&FUTURE ENCHANCEMENT

This project allows the user to utilize all the Government e-services and the average users also access the service directly without using any browser. This paper follows the integrated cloud paravirtualization hence the hardware required for this system is common and minimum configuration. In future this system will be proposed using Natural language Processing. The natural language understanding engine essentially parses the request and associates a meaning with it. Speech and natural-language processing technology will be creative sense of access and it supports user friendly IVR in the Conglomerate service in future.

Technically, Practically, Economically, the Conglomerate Information Service proves to be the best.

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