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Fast Synchronization In IVR Using REST API For HTML5 And AJAX

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Abstract
Need a web service is just a web page meant for a computer to request and process. IVR system uses REST API for data access while calling. When in call process user want to access data, server need to validate it and while validation data accessing must be synchronize with mysql server. For large data accessing API is essential.
This method is for HTML5 and AJAX for fast data synchronization. REST can support any media type, but XML is expected to be the most popular transport for structured information. In IVR System problems with fast data access because before uses HTML4. Proposed work is for HTML5 with AJAX implementation.

Keywords— interactive voice response, hypertext markup language 5.0, AJAX technology.

I. INTRODUCTION

Cloud computing environments provide on-demand resource supplying, allowing applications to elastically scale. However, application point of reference is currently being used to test cloud management systems are not designed for this purpose. This result in resource under provisioning and quality-of-service (QoS) violations when system is tested using these benchmarks are deployed in production environments. [2] We present C-MART, a benchmark designed to emulate a modern web application running in a cloud computing environment. Using cloud computing, it is designed paradigm of elastic scalability at every application tier and utilizes modern web-based technologies such as HTML5, AJAX and jQuery. C-MART consists of a web application, client emulator, server, and API.

The deployment server automatically deploys and configures the test environment in orders of magnitude less time than current standard. The scaling API allows users to define and provision their own produced datacenter. The client emulator generates the web workload for the application by emulating complex and varied client behaviors, considering decisions based on page content and previous history. We show that C-MART can detect problems in management systems that previous benchmarks fail to identify, such as an increasing error in predicting server CPU utilization and resource under provisioning in 22 percent of QoS measurements. AJAX, jQuery and HTML5 are big buzz words in the web design/development community nowadays. While acquiring these web technologies to work together is exciting, the programming skills required to do this isn't new. AJAX, jQuery and HTML5 work together through the use of page tags, page IDsand page classes that exist between the two tags of a web page. The JavaScript functionality embedded in jQuery and AJAX finds these tags , IDs and classes (which we'll now call *page elements*) and "does" something to them; maybe it changes their background color, it may loading copy into them. Either end, it is doing *something* to them. This process of "finding and doing something" to these page elements with JavaScript is more commonly known as *"traversing the DOM"*. Traversing the DOM is the way to getting AJAX, jQuery and HTML5 to work together. Web developers have used DOM traversal for many years, again, there really isn't that much new programming involved when it comes to synchronize AJAX, jQuery and HTML5.

II. RELATED WORK

In the global adversarial model, where the efficiency of accessing data from the database is normal but quite slow. Thus the different approaches carried were explored below-

A. Syncronisation of IVR with HTML 5.0

Short for ***i**nteractive **v**oice **r**esponse*, a telephony technology in which the one uses a touch-tone telephone to interact with a database to acquire information from or enter data into the database. IVR technology does not require human interaction over the telephone as the user's interaction with the database is predetermined by what the IVR system will allow every user access to. For example, banks and credit card companies use IVR systems so that their customers can receive up-to-date account information instantly and easily without having to speak directly to a user. IVR technology is used to gather information, as in the case of telephone surveys in which the user is prompted to answer questions by pushing the numbers on a touch-tone telephone.

The new king on the hill is “HTML5″ which has taken that exact mantle. One intense view is that the term is marketing drive. The other one is that it should ONLY be used to mean the W3C version of the HTML5 core specification. The main objective in system is to synchronize the IVR database with HTML 5.

B. *Security against attacks in HTML 5.0*

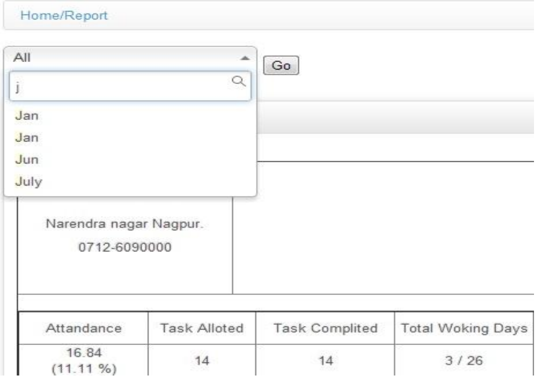
HTML5 is an emerging stack for next generation applications. HTML5 is intensifing browser capabilities and able to execute Rich Internet Applications in the context of modern browser architecture. Interestingly HTML5 can run on mobile devices as well and it makes even more complicated. HTML5 is not a single technology stack but combination of various components like XMLHttpRequest (XHR), Document Object model (DOM), Cross Origin Resource Sharing (CORS) and enhanced HTML/Browser rendering. It brings many new technologies to the browser which were not seen before like localstorage, webSQL, websocket, webworkers, intensify XHR, DOM based XPATH to name a few. It has enhanced attack surface and point of exploitations for attacker and malicious agents. By supplement these vectors one can craft stealth attacks and silent exploits, it’s very hard to detect and easy to compromise.

HTML5 has several new components like XHR-Level2, DOM, Storage area, Application Cache, WebSQL etc. All these components are making fundamental backbone for HTML5 applications and by nature they look very still. It allows crafting stealth attack vectors and adding risk to end client. Structured layers as mentioned in the above section provide more clarity on a possible enhanced attack surface. This exposes browser components of an application to a set of possible threats which can be exploited. Hence the proposed system includes the security against attackers which can be controlled by HTML 5 and AJAX. The data in the database saved permanently in the web server for the use of IVR system.

C. *Persistent DummyTraffic*

Private Database Clouds are a proven model for the delivery of database services. Private database cloud servers allow customers to consolidate servers, storage, and database workloads onto a shared hardware and software substructure. By providing on-demand access to database services in a self-service, elastically scalable and metered manner, private database clouds offer conclusive advantages in cost, quality of service, and deftness. Accelerate and optimize deployment by leveraging Oracle Database, Oracle Real Application Clusters, and Oracle Servers & Storage servers.

A database accessible to clients from the cloud and delivered to users on demand via the internet from a cloud database provider server. Also referred to as Database-as-a-Service (DBaaS), cloud databases can use cloud computing to achieve perfect scaling, high availability, multi-tenancy and effective resource allocation. While a cloud database can be a traditional database such as a MySQL or SQL Server database that has been adopted for cloud use, a native cloud database such as Xeround's MySQL Cloud database tends to better equipped to optimally use cloud resources and to guarantee scalability as well as availability and contancy. Cloud databases can offer significant advantages over their traditional equivalent, including increased approachability, automatic failover and fast automated recovery from failures, automated on-the-go scaling, minimal investment and maintenance of in-house hardware, and better performance. Simultaneously cloud databases have their share of potential drawbacks, including security and privacy issues as well as the potential loss of or inability to access critical data in the event of a disaster or bankruptcy of the cloud database service provider.



Narendra nagar Nagpur.
0712-6090000

Attandance	Task Alloted	Task Complited	Total Woking Days
16.84 (11.11 %)	14	14	3 / 26

Figure 1: Ajax output in calendar selection

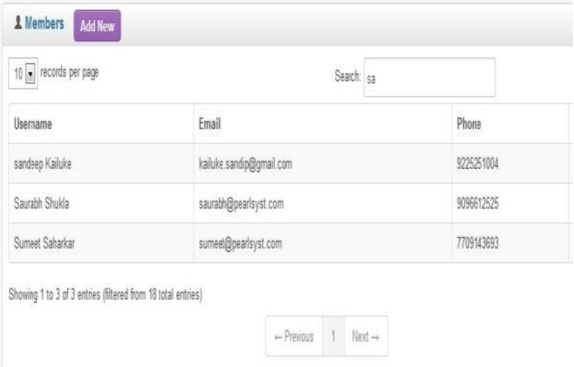
D. *Efficiency in respose time*

Flooding or using dummy messages have the drawback of introducing a large amount of message overhead. Hence it is overcome by utilizing beacons at the MAC layer. Beacons are sent out regularly, which essentially forms a constant-rate of dummy messages. Using beacons may increase the delivery delay of event information as they are sent out at the predefined beacon interval only, but using this latency can be controlled. The cross layer where routing and MAC layer solutions are combined the naïve solution within MAC layer is used where solid square node detects an event and broadcast it to neighbors in 4 hops and node on 4th hop sends information to the base station [7]. Double cross layer solution also controls latency as Crosslayer solution but improving more privacy where random node is chosen to forward the information. A cross-layer relay-selection algorithm and a distributed beam forming protocol can also be used to increase BS anonymity [2].

III. Proposed Methodology

This proposed system implements the fast synchronization between the database in an IVR system using HTML 5 and AJAX technologies. Previously the HTML 4 have same feature but the time taken to execute that command will take more time or some time the session will also expires due to asynchronization of database. The security against the attackers will have the main issue regarding software application.

The response time of HTML5 page is much less than HTML4 page in both the servers. Because in HTML5 page, JavaScript code is replaced by HTML5 form tag, which reduces the HTTP request significantly. From the server point of view, response time required by HTML5 page for Apache is less than IIS. In Apache, for HTML4 page, mean value of response time was found to be 976.28 ms with variance 23.16 ms. While for HTML5 page, an average response time of 230.28 ms was observed with variance 51.37 ms. In case of IIS, a mean response time of 1506.13 ms with variance 16.19 ms was observed for HTML4 application. While for HTML5, mean response time and variance were calculated as 302.66 ms and 24.32 ms respectively.



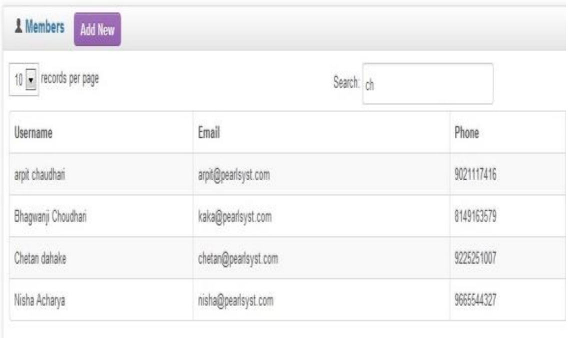
10 records per page

Search: sa

Username	Email	Phone
sandeep Kailuke	kailuke.sandip@gmail.com	9225251004
Saurabh Shukla	saurabh@pearlsyst.com	9096612525
Sumeet Saharkar	sumeet@pearlsyst.com	7709143693

Showing 1 to 3 of 3 entries (filtered from 18 total entries)

Figure 2: AJAX in HTML5 search box

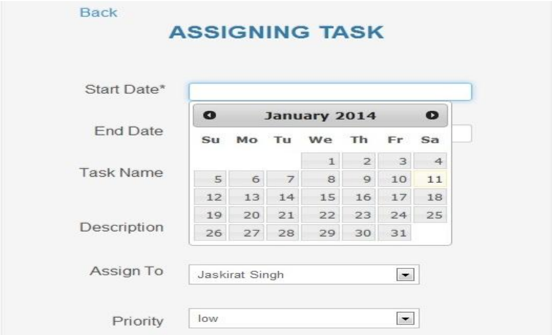


10 records per page

Search: ch

Username	Email	Phone
arpit chaudhari	arpit@pearlsyst.com	9021117416
Bhagwanji Choudhari	kaka@pearlsyst.com	8149163579
Chetan dahake	chetan@pearlsyst.com	9225251007
Nisha Acharya	nisha@pearlsyst.com	9665544327

Figure 3: AJAX in HTML5 search box



ASSIGNING TASK

Start Date*

End Date

Task Name

Description

Assign To: Jaskirat Singh

Priority: low

January 2014

Su	Mo	Tu	We	Th	Fr	Sa
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

Figure 4: Date selection in HTML5 using AJAX

IV. Conclusion

In this paper we propose the IVR system will consume less time to switch divert the information from source to destination. The system will allow utilizing the best technology available not only languages, but to utilize the database to make the efficient use of the software.

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