Creation of Load Balanced Mail Server Management System Using Cloud Computing

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ABSTRACT:

This system facilitates mailing among the users of an internet, having an efficient and easy to communicate with telecommunications. The mails are transmitted and receiving by individual users registered in a mail management server. To prevent unauthorized to access the mail, message arrive in mail atleast one of them is deleted to store efficient mail using less storage space. There exits various applications Intranet/Internet services such as E-mail, Flip, news, telnet, archive the web-based internet/intranet service management to evaluate the performance.

Keywords: mail server management system, load balancing, cloud computing, telnet, intranet and internet.

I.INTRODUCTION:

Electronic mail service is the rapid growth of the Intranet/Internet its explains how to read and use Management Information Base(MIB),[5] Simple Network Management Protocol(SNMP) these devices are managed ones that can be controlled, monitored and are capable of reporting events.OSI(Open System Interconnection) (ISO 7498,1984), because protocols and architecture other than OSI[6][2]. They are widely used for Open Systems networking, SNMP can be used to manage objects by configuration, performance framework called the structure of management information. TCP/IP is an open system networking largely inability of the OSI standards developers to deliver. The term TCP/IP is commonly used to refer Specifically Transmission Control Protocol(TCP) and Internet Protocol(IP)[. In Internet community, QoS control for Internet Protocol Network's and it has become a hot issue. Internet Engineering Task Force(IETF)[1] the Quality Of Service controls the Internet.CGI is a Common Gateway Interface for interfacing the external programs with information servers on the Internet.CGI is distinguished from plain HTML; "HTML"[11] is static, while executes in real-time the output in dynamic information that implements while [CGI Executables. The Scripts can be written in any languages like (c, c++, Fortran, Visual Basic and unix shells).[17]CGI script is to debug eaiser and modify and maintains the typical executed programs.

II.RELATED WORK:

Mail Server is also known as mail transfer agent or MTA. An application that receives incoming e-mail from local users and remote sends and forwards outgoing e-mail for delivery. The mail server works in conjunction to make sometimes refer to as messaging systems. While sending an e-mail, message ,[17] your e-mail program like outlook , which passes the message to your mail server. The rule that works "SMTP" or "ESMTP" or "POP3" or "IMAP".[17] Web based intranet/internet service management to present design and implementation system with quality of service(QOS). [10]Management information bases requires the various internet service management. Internet services have been applied to improve many organizations, internet services such as web hosting, being developed an enterprise network that controls different domains. The standard SNMP to achieve a proxy forward on the 6LOWPAN[2] gateway.[2][5] Proxy forwarder is converted from SNMP messages from one version to another . Its transfers current messages to SNMP versions. The messages gets conversion and its forwards the details in some multiple requests coming messages regularly.

E-mail: Electronic mail – sending and receiving files, images, text files between different computers using fax modems,[3] networks must have mail software. More than 3.1 billion people send 244 billion messages monthly. Software

applications allowing people to communicate with each other (exchange data) using fax they are sending like hardcopy of text or photographs between computers it receives internet telephone software Standards developed by cooperating among forms and government. A set of rules that govern all the aspects of data between computer networks. These includes the following characteristics of network : access method, allowed physical topologies, speed of data transfer. A simple network management system(SNMP)[1],[4] it allows simple maintenance remote monitoring of any device on network SNMP admin indentifies the issues such as with intranet card in a server program , or a device such as hub or router.

The system management system and the management information base QOS[9] provides a traffic management intranet particularly during the times of congestion or failure. Resources management enable you to collect, display, store and analyze data about system performance it's a real-time monitoring , analyze and report using records of system activity[3]. RM may rake a minute to generate alerts abnormally terminates the server. However the servers have been shutdown/remote/have MAS service stopped in the normally it stores information about server performance, these can sends alerts via "E-mail", "SMS", "SNMP".[9][18] Security is a process which manages the security environment of network, it includes during the security violations to maintain security audits and performs the network management tasks. The real-time tracking mechanisms of IP-based enterprise networks and[4] ISP network. There are security violations and issues such as fault-tolerant and suitable intrusion information transport with reasonable remote controlling network resources.The UNIX operating system was born late 1960s. Its originally began a one man project led by Ken Thompson of Bell Labs. Since grown to become most widely used Operating System Multi-user, Multi-Tasking of UNIX capable of allowing multiple users to log on to system. Large number of applications are available for UNIX[Operating System such as[15] CAD, word perfect and many other available free applications. Internet development of the backbone of the internet is run by

UNIX servers and more general web servers run UNIX with the apache web server.[6][4] The "OSI" model is a concept that includes a set of protocols to define and standardization of the data communication process. Its defined by the International Standard Organization(ISO)[6]. In the beginning of 1983 Operating System model developed by representatives of major computer and telecommunication companies. According to OSI document(SIO 7498) the purpose of Operating System is International Standard reference model of open systems interconnection to provide common basis for the coordination of Standard developments. Network group is made up of [8]"physical layer, data-link layer, network layer". Transport group consists of "Single-layer" and the "Transport layer"[16]. Application to group consists of session layer, presentation layer and application layer. The basic functions of physical layer are handles voltage electrical pulses, switches so that the data can be transmitted from one to another drive. The data link layer is often divided into 2 parts : logical link control(LLC) and medium access control(MAC).[10]

The main function of data link layer are handles the physical transfer, farming, flow-control and error-control functions over a single transmission link. Network layer is the third layer of OSI model . Network layer establishes the rate between the sending and receiving stations. In this layer we use the Internet Protocol(IP)[17] . The forth transport layer of OSI model is responsible for constructing stream of data packets and checking for correct delivery if the data is sent incorrectly, this layer has the responsibility to ask for retransmission of the data. The session layer uses of POP, TCP/IP protocols.[17],[10] Presentation layer provides files and services , in this layer POP, SMTP, FTP protocols are used. Application layer is the common functions for opening, closing, reading and writing files. It provides functions to users networks, including e-mail, web application and files transfer access and management(FTAM),[14] directory services , network management common gateway interface interfacing external programs with information servers of the internet.

CGI executes in real-time output "dynamic" information. HTML document is "static", document exists as constant text file that does not change. In 1993,the world wide web was small, but software developers and website developers kept in touch with the www-talk mailing list.[17] CGI script can be written in any language (e.g.: C/C++,visual Basic, Unix shells), A CGI script is easier to debug, modify and maintain than the typical executed program. POP3 (Post Office Protocol) used to retrieve E-mail from a mail server. The E-mail applications uses the POP protocol, some can use the Internet Message Access Protocol(IMAP).[17][8]The first version called POP2,it became a standard in mid-80's and requires SMTP to send messages. The newer version POP3, can be used SMTP POP3 uses TCP/IP port 110. Hence you need to have delivered atleast one message to the user, to create their own mailbox, before they can login and look for logging messages.[11]

Mail Transfer Agent (MTA) is done through messages tranfer agent (MTAs). to send mail, a system should have client MTA and to receive mail, a system must have server MTA.[13]

If you are using SMTP in MTA mode or HTTP in active bridge mode:

->select the mode blocking.

->select the SMTP HELO name.

->set the Next HOP if required(eg:company mails mainly).

III.PROBLEM STATEMENT:

Mail Server Exchange 2013 brings a new set of technologies, services and features to the exchange the server product line. Social integration and making it easier to find people important to users. Microsoft outlook 2013 and Microsoft outlook web app had a fresh new look.[17] E2013 builds upon the exchange server 2010 architecture have been redesigned or failure isolation.

An Organization grows in size in terms of departments and functionalities; it requires a efficient

to achieve instant communication between employees. The "Intranet/Internet"[1] namespaces and also it occurs in authentication for clients, session affinity doesn't requires at load balancer, because there is no problem in forwarding the one session to another client access server's Existing model exchanges the deployments are overly complicated, while doing a load balancing [17]exchanges the "right" hard and its requires the expensive solutions, there are many hard wares to load balancing impacts scalability significantly organizations needs in a consistent and transparent efficiency.

IV.PROPOSED SYSTEM
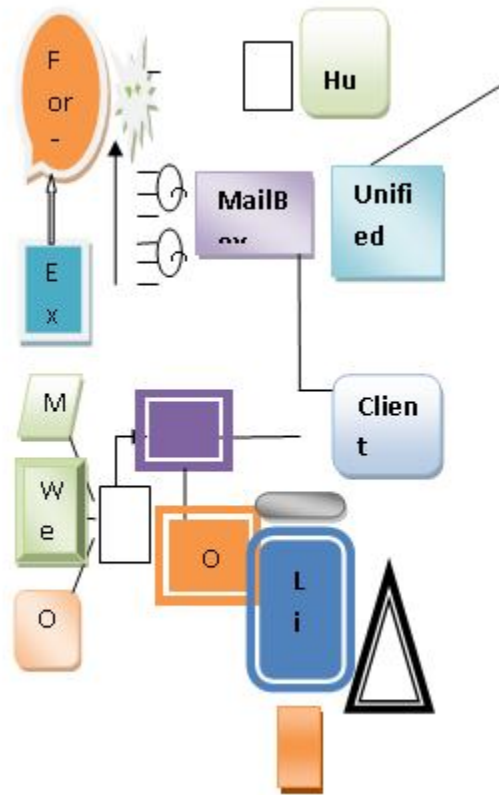
Figure(1):E2007 - E2013 Server Architecture

There are like many namespaces are used(mainly in site resilent designs) the customers, mainly deploy and its based on dedicated server rules.
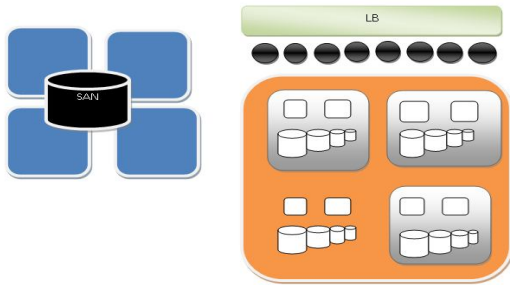
Figure(2):Exchange The Evolution

Figure(3):Exchange The Evolution Of 2013

1. Simplify for Scale, Balanced, Utilization, and Isolation.

2. Integrate HA for all roles.

3. Simplify Network Architecture.

The screen appears two major items [18][10]"Xmail" and "roundcube". The 'Xmail' is act as mail server to manager all of mails send/receive for all users. The "roundcube" is a tool that user can access own mails through interface; it normally called "web mail" .

To better understand this definition, we must first break down IoE's individual components. People: In IoE, people will be able to connect to the Internet in innumerable ways. Today, most people connect to the Internet through their use of devices (such as PCs, tablets, TVs, and smart phones) and social networks (such as Face book, Twitter, LinkedIn, and Interest). [6]As the Internet evolves toward IoE, we will be connected in more relevant and valuable ways. For example, in the future, people will be able to swallow a pill that senses and reports the health of their digestive tract to a doctor over a secure Internet connection.[8] In addition, sensors placed on the skin or sewn into clothing will provide information about a person's vital signs. According to Gartner, people themselves will become nodes on the Internet with both static information and a constantly emitting activity system.
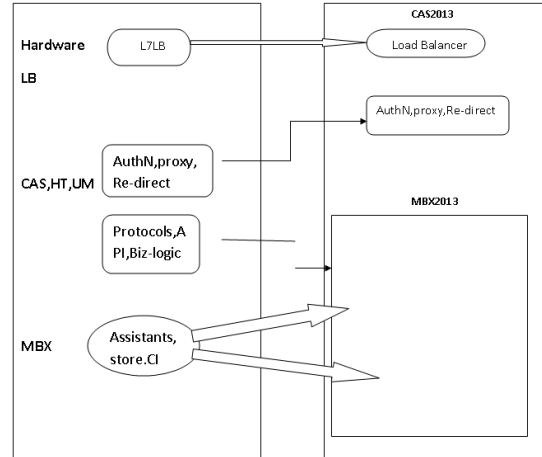

Figure (4): functional layering

The Exchange Server 2013 has been announced in technical preview, communication and messaging platforms its occurring in new level. In 2007 splitting the functionality into[11],[3] HUB, CAS, UM, Edge and mailbox. The architecture remained same in exchange 2010.[18]Exchange server, the architecture has been changed to consolidate all the role to the following three components like "Client protocol"(HTTP, IMAP,POP), "SMTP" "UM call router". using RPC eliminating the need its support RPC protocol outside using single box and making communications in mailbox and CAS servers over HTTPs or SMTP. Its provides a unified[13],16].

Load balancing is used to require managing the yours servers and receive traffics. Its provides failover redundancy to ensure a client access servers. Its help to distributing incoming client connections over a variety of endpoints for example: To ensure your users to continue receive services to failure in case of computer by using load balancing its also enables to handle more than one servers traffic. High availability uses database availability groups (DAGS) in E2013[10] multiple copies to keep your mailboxes with different servers. In that way, database fails on from one server, the users connected to synchronized database to another server. In online mailbox move, those users can access email accounts while during the move. Here, users email accounts while during the move. The users locked out their accounts for

only a particular time at the end of the process. it can perform online across forests or else in the same forest.
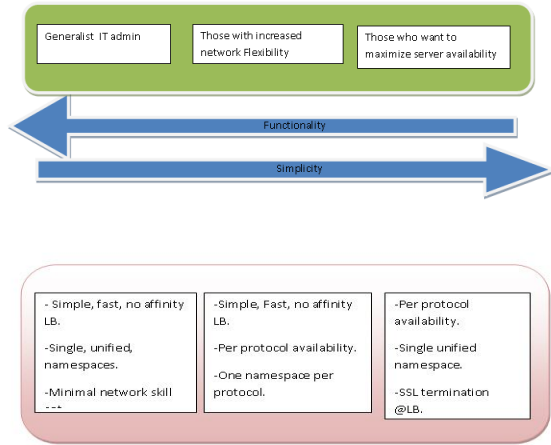
Figures(5):Exchange in load Balance server
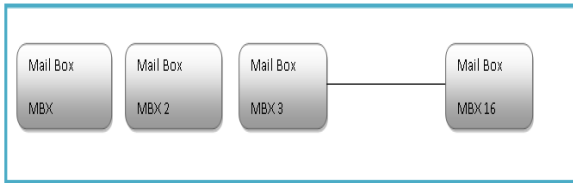
Figure(6):Mail Box Server Role

Mail Box Server Role reduced in micro soft exchange 2013 to just two " increase simplicity of scale, Hardware utilization and failure isolation"[LB][18] which includes all the Client access protocol and Hub Transport Service and mailbox databases also handles all activity. Clients do not directly to MBX2013 servers, and Connectivity through CAS2013. [18]Server hosts all the components that process, renders and store the data evolution of E2010 DAG:

1.DataBase are replicated between servers in a given DAG.

2.Maximum of 16 Mail Box servers.

3.Collection of Servers that form a HA unit.

4.50 Data Base copies/server.[11][14]

Mail Delivery from a client application to the server and server is handled to the destination server, is the Simple Mail Transfer Protocol. There are two primary

Protocols used by email client application to retrieve the email from mail servers: Post Office Protocols(POP) and the Internet Message Access Protocol(IMAP).[1][18]

The New Store Process is effectively made up of three processes : Replication service, Store service process/ store service controller, store worker process. Store service process/controller manages the store worker processes, Each database have its own store worker process and the Replication service initiates failovers and responsible for issuing mount/dismount operations.

V.ALGORITHM

Pseudo Code Carton:

DRL-UpdateCapacities()

    Once every Δ units of time do

        for i=1:N

        $\mu_i \leftarrow \mu_i + \Pi \sum_{(i,j)} \epsilon E^{(q_i - q_j)}$

        endfor

enddo

InitializeCapacities()

        for i=1:N

        $\mu_i \leftarrow \mu/N$

        endfor

UpdateDemands()

        g(k)=subgradient of V in x(k)

x(k+1)=x(k)- 1/⌐$_k$g(k)

DESCRIPTION:

Step1: Control cloud based services for load balancing and distributed rate limiting.

Step2: The matrix demand allocation X and capacities which performance is approximately equal and minimizes the aggregate cost.

$$V(x)= \sum_{j=1}^{M}\sum_{i=1}^{N}C_{ij}x_j^{(i)}+\sum_{i=1}^{N}D_i(y_i)$$

Step3: The capacities of dynamic resource allocation is required update() for every delta units of time.

Step4: Integer value 1isto N no. of servers its passes to the mean value.

Step5: Its "end for" must be a demand allocations.

Step6: The initializations start and become load balancing and distributed rate limiting.

Step7: one is to N no. of servers to the mean value must be sub gradient of vertices in x(k) to minimizes the cost in DRL(Dynamic Resource Allocation).
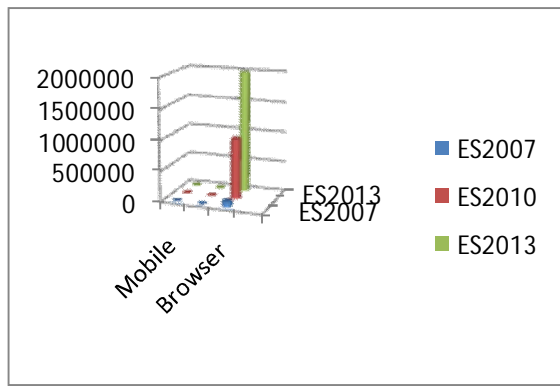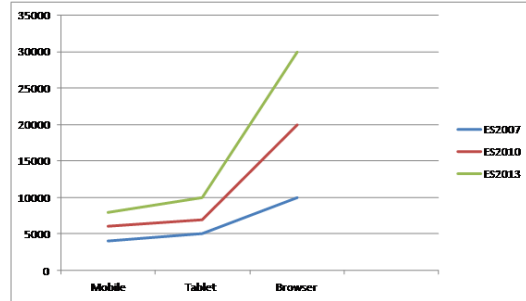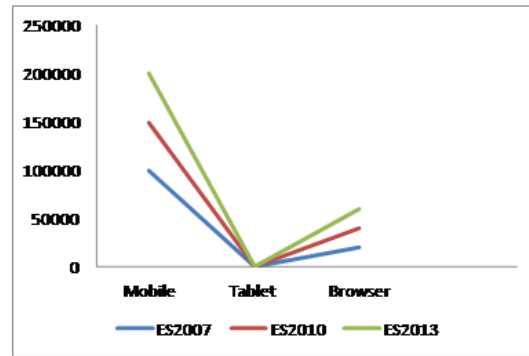
VI.EXPERIMENTAL EVOLUTION

Figure (7) :Graph:

Figure(8) Expectation Graph(1).

Figure(8) Expectation Graph(2)

VII.FUTURE WORK

A user can empowering educators are developed their own Intranet pages and therefore they are encouraging module pages for which they are responsible,[9]with the need for material to be posted via Intranet development team, like integration of animations and video clips to increase student/staff interaction[12].The choice to encrypt them it as to be assured that the data will not be altered or read during transmission. The furthermore, issues regarding the legality of a formal document sent electronically.(eg: via E-mail)need to be explored. [13].and we plan to develop applications based on micro soft exchange server to enable the user with services like messaging to physicians, and hospital departments and staff, the customer services, send text, charts, graphs and other documents[14] it includes links to world wide web sites in network wide address book. The internet management

framework was conceived mainly for [1],[5]LAN/MAN management. It follows a "lowest common denominator" approach to management standardization its fixes some of the problems of

VIII.CONCLUSION

SNMP provides valuable insight to any network administrator which requires the complete visibility into network.TCP/IP[3],[5] makes so much assertion in the web-based Intranet/Internet mail server management system. It's a real-time multicast systems .OSI asserts that distributed applications operate over a strict hierarchy of layers. we have defined SNMP and MIB[1] monitoring mail server process. such as CGI and java enables human users to learn and maintain easily and cost effectively. Configuration management evolution is a software product. The operation level for[6],[11]Configuration management systems an area in software engineering environment when progress has been made.

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version(eg: object/creation/deletion)[15] the OSI management framework was conceived by mainly for WAN management and telecommunications.