Controlling the Web traffic and eCommerce portal by using the concept of accessing data Information form client side to the server for a particular web site having internet traffic

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Abstract:→This paper represents how the information stored on client side can be directly access to the online web application of server during access web page. The information stored on client PC in a formatted way so it directly takes data from client side and send to the web server for further processing for certain decision. The information will be send to other by Web services and result will come back for the client to take decision. The efficiency of data access from client to web server is increased. The web page is stored on the web server and connected to the internet , the time of data inputting to the web application reduces the traffic on webserver , so traffic and load on web server be reduced. The login expires error occur less will be reduced due to less consumption of time while processing the online website as virtual users connects the website. Rapid and accurate submission of data is helpful when concurrent users are there to buy items online. In our Railway system Tatkal quota is there , it opens at 8:00 a.m . Several users are entering on web site to book tickets. Load of traffic for particular website is very high. User is not able to load website on their PC to enter data → e.g Particular Train No, Class, Sex ,Name and Date,. After sometimes the user will get error of expires login or it takes more time to process the data. The concept of data file can be used while connecting the site with particular input formatted data for a particular site from client PC directly and send the data for processing. A client program can be easily developed for such type of applications and installed on the particular PC. While entering the data online it takes much time so within that time other user will take seats, even though before 1 minutes it shows vacant. Due to concurrent users the person who sends data first will be given seats . It solves other problem of security during E-commerce transactions. While entering confidential information on web site , we can directly upload the data file with password which can directly access by the Web Server. It will reduce the hacking capacity for a particular account from web and also the transaction process will not display on the client side. It works on the web server and directly shows valid transaction with receipt number and other documents. The traffic of electronic transactions of authorization and entering information will not display on client side, It works on back end side and directly it shows results. Confirmed transactions with valid code otherwise its shows invalid transaction. Completing secure electronic transactions and giving information by providing input values from the file instead of entering input values through web page controls. It give solution to the websites   containing electronic transaction and having huge web traffic on Internet with concurrent users.

Index term → Electronic Transaction, Web Traffic , Website Load Distribution, Virtual Users

I Introduction: Some very high profile websites have suffered from serious outages and/or performance issues due to the number of people hitting their website. Web traffic is the amount of data sent and received by visitors to a web site. It is a large portion of Internet traffic. This is determined by the number of visitors and the number of pages they visit. A concurrent user is a person who is accessing a system resource at the same time as one or more other users. Although your site may be handling x number of users per day, only a small percentage of these users would be hitting your site at the same time. For example, if you have 10000 unique users

hitting your site on one day, all 10000 are not going to be using the site between 8:00 and 8:15 am. Some very high profile websites have suffered from serious outages and/or performance issues due to the number of people hitting their website. E-commerce sites that spent heavily on advertising but not nearly enough on ensuring the quality or reliability of their service have ended up with poor web-site performance, system downtime and/or serious errors, with the predictable result that customers are being lost. When creating an eCommerce portal, companies will want to know whether their infrastructure can handle the predicted levels of traffic, to measure performance and verify stability. These types of services include Scalability / Load / Stress testing, as well as Live Performance Monitoring. Load balancing is a computer networking methodology to distribute workload across multiple computers or a computer cluster, network links, central processing units, disk drives, or other resources, to achieve optimal resource utilization, maximize throughput, minimize response time, and avoid overload. Using multiple components with load balancing, instead of a single component, may increase reliability through redundancy. Load Balancing is a solution that involves aggregating multiple Internet connections through the appliance in order to distribute traffic efficiently and improve traffic flow and reduce bottlenecks brought about by the use of a single connection. If a single connection fails, then the UBM will continue to utilize the remaining connections to ensure business continuity through it's failover feature. For inbound interfaces, where these products are the destination, interface tables as well as supporting validation, processing, and maintenance programs are provided. For outbound interfaces, where these products are the source, database views are provided and the destination application should provide the validation, processing, and maintenance programs. If the data is to be uploaded from any legacy system to Oracle apps the interface is called inbound.if any data is supposed to be send from erp to any other.

II Objective:-

- To utilize bandwidth capacity

- To control the overall amount of traffic to web site which is expected to grow
- To achieve maximum Internet uptime
- To secure electronic transaction
- To utilize different Internet technologies
- How quickly the number of users might ramp up to that peak load level
- To understand the volume patterns, and to determine what load levels your web site might be subjected to (and must therefore be tested for).
- To improves the traffic flow of data that

is being sent back and forth between a remote or end user and the organization's hosted servers. With a single Internet connection these incoming requests can become congested especially if numerous requests come in together

- To managing the data from remote or external users that are requesting information from the organization's network.

The main objective is to supply data information from the client side PC in terms of file and formatted required data directly to web server for processing it. The desired output can send directly to the user destination. So more concurrent user can connect to the online web application.

III Design & Explanation

Traffic can easily build up within a network due to certain applications such as VoIP and during peak periods. If your bandwidth capacity is low, then this can cause data packets to queue up (congestion) or data packet loss. the use of the available bandwidth by distributing Internet traffic down each Internet connection. With traffic being shared among each Internet connection at the same time and rate, there is less congestion and delays for the end user. This is achieved by distributing the traffic from both directions over multiple Internet connections instead of one, through the use of Intelligent DNS. With a single Internet connection these incoming requests can become congested especially if numerous requests come in together.

Designing a Web site load test is to measure as accurately as possible the current load levels.
Some of the variables that could be tracked include:

- The length of the session (measured in pages)

- The duration of the session (measured in minutes and seconds)
- The type of pages that were visited during the session (e.g., home page, product information page, credit card information page etc.)
- The typical/most popular 'flow' or path through the website
- The % of 'browse' vs. 'purchase' sessions
- The % type of users (new user vs. returning registered user)

The rate at which the number of users build up, the "Ramp-up Rate" should be factored into the load test scenarios (i.e. you should not just jump to the maximum value, but increase in a series of steps). program your load test tool to run each scenario with the number of types of users concurrently playing back to give you a the load scenario. The key elements of a load test design are:

- test objective
- pass/fail criteria
- script description
- scenario description

By emulating multiple business processes, the load testing can generate a load equivalent to X numbers of virtual users on a Web application. During these load tests, real-time performance monitors are used to measure the response times for each transaction and check that the correct content is being delivered to users. In this way, they can determine how well the site is handling the load and identify any bottlenecks. The execution of the scripts opens X number of HTTP sessions (each simulating a user) with the target Web site and replays the scripts over and over again. Every few minutes it adds X more simulated users and continues to do so until the web site fails to meet a specific performance goal.

When an user logins to website for particular transaction, it requires to fillup the information in terms of web form and it goes for processing and after getting result it again requires to fillup the information for payment and after that it gets confirmation of that entire process by getting document on web page or to desired client email address.

Steps to show a particular website works for virtual user to complete E-commerce transaction
1st →Client connects with user via login
    form

2nd→ Client inputs data to find a particular item from web page
3rd → Web server will provide data to the client by fetching information from its centralised database server by using any services. It may uses web services or any other technique to fetch the records from database
4th →On availability client starts to by the item by confirming
5th →Clients need to pay the amount by inputting again through online web. It again requires to entire the details of its card and password on web for electronic transaction
6th →Now it shows processing of electronic transaction on client side and confirms the transaction if valid input sent for electronic transaction.
7th →The output will be shown on client side and it sends documents to the desired client email address. Problems facing for high traffic websites.

1. Due to concurrent users and having high web traffic on particular website , its not able to open.
2. In step2 and step5 it ask to input the information in a form which is very much time consuming.
3. On client side it shows validation of Electronic - Transaction
4. It requires internet connection and also good bandwidth on client side to complete the transaction
5. While entering the information and processing the electronic transaction, the availability of particular item within time shows not available and entire transaction comes into wastage of time and time consuming on both for particular client and server side.

IV Solution:->

Developing clients program for a particular website can be helpful. It connects via client program and it takes input information from client side in a file or a formatted input , which is already prepared before connection with a user. By just asking input values for a particular item by application , it provides by just clicking button , so there is no need to enter , it automatically upload or attached file with secure password. Both the information of particular item and electronic payment can be send directly. On server side it takes care and process it and output will be directly given to the desired document of client email address . So processing of electronic transaction will not be shown on client side. Server will process on its

own side. It extracts the data from file on its own by programming and send result directly.

Scripts should be combined to describe a load testing scenario. A basic scenario includes the scripts that will be executed, the percentages in which those scripts will be executed, and a description of how the load will be ramped up. It is vital during the execution phase to monitor all aspects of the website. This includes measuring and monitoring the CPU usage and performance aspects of the various components of the website – i.e. not just the webserver, but the database and other parts as well (such as firewalls, load balancing tools etc.) the performance issues that they were experiencing were due to database performance issues – while the webserver CPU usage was only at 25%, the backend db server CPU usage was 86%. Start with a test at 50% of the expected virtual user capacity for 15 minutes and a medium ramp rate.

After making any system adjustments, run the test again or proceed for 75% , 100% , of expected load. while monitoring and making the necessary adjustments to your system as you go along.

IV Result

It produces the report for the following

- Page response time by load level
- Completed and abandoned session by load level
- Page views and page hits by load level
- HTTP and network errors by load level
- Concurrent user by minute
- Missing links report, if applicable   Full
- detailed report which includes

It reduces web traffic on the internet and more concurrent user can access sites. It helps to reduce the hacking of electronic transaction information from client side.

VI Conclusion

It reduces the time connectivity on internet for a particular website.Web-based stress testing of web sites are therefore more accurate when it comes to measuring a site's capacity constraints. When testing websites, it is critically important to test from outside the firewall. In addition, web-based load testing services, based outside the firewall, can identify

bottlenecks that are only found by testing in this manner. Once launched, the site can be regularly checked using Live Performance Monitoring tools to monitor site performance in real time, in order to detect and report any performance problems - before users can experience them. Installing program on client side for a particular websites , it helps to control and reduce the web traffic for particular electronic transaction by providing information from client side to web server.

VII Acknowlegement

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