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The System to Effectively Provide Content to Multiple Users

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ABSTRACT

This disclosure describes a method to efficiently distribute content over multiple users in a computer network. The system consists of a search engine, a server cluster to store data temporary and a database cluster to store data permanently. Users who use this system has to first register with the search engine and download a special web browser. The search engine first gets to know all the webpages the users' need. Then it will copy them from the database cluster which store data permanently and to the server cluster which stores data temporary. The search engine will then provide the users with the content they needed.

KEYWORDS

- Database cluster
- Web browser
- Search engine

BACKGROUND

Webservers stores a lot of information. Each server has its own traffic handling capability. If a particular large number of users' request content from the same webserver, chances are that it might overwhelm the web server and will not be able to provide the service smoothly (even if all the users are legitimate users and are not botnets, still the server could get overwhelmed if an unexpectedly large number make requests).

DESCRIPTION

This disclosure describes a method to efficiently distribute content such as text pages and images over multiple users in a computer network. The main entities taking part in the method are described below.

- Entity one: the web browser

The web browser is used to interact with the search engine. A user can use the web browser to open multiple browser tabs but is only allowed to interact with only one browser tab at a particular time instance.

- Entity two: the search engine

The search engine provides the user with the search results. The search engine can serve maximum of N number of uses at a particular instance.

- Entity three: server cluster to store data temporary

This server cluster is made up of a collection of server nodes. The total number of nodes equivalents to the maximum total number of users the search engine can provide service at a particular instance to. That is N number of users.

- Entity four: The website collection

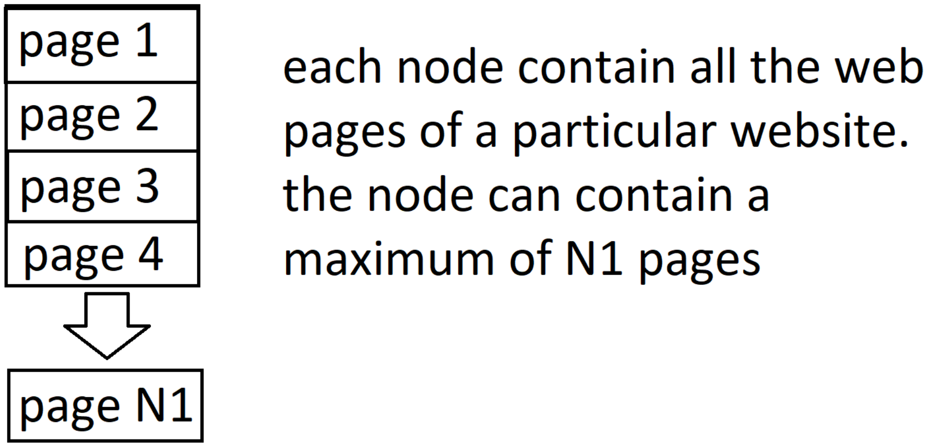
This system contains storage space to store a maximum of N1 number of websites. Where N1 can be less than, equal to or greater than N.

- Entity five: the database cluster to store data permanently.

This database cluster have two types of server nodes. They are described below.

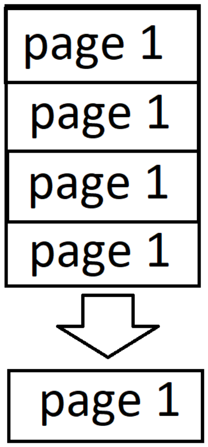
1. Type one database server nodes: entire website storing nodes

There are N1 number of type one database server nodes. Each node contains exactly one – entire website. All the web pages of a particular website are stored in a one node. The node can have a maximum of N1 web pages. This is described in the diagram below.


page 1
page 2
page 3
page 4
page N1
each node contain all the web pages of a particular website. the node can contain a maximum of N1 pages

2. Type two database server nodes: entire page set storing nodes.

There are N1 number of type two database server nodes. Each node can hold N1 amount of web pages. All the same numbered web pages of all websites are stored on each server node. This storage method is described in the diagram below.



this node which is the first server node contains all the first web pages of all the websites. There are N1 such nodes, where each node can hold a maximum of N1 number of web pages.

As described by the diagram this node contains all the first pages of all the websites in this system. The next node will hold second pages of all the websites available in this system. Likewise, the entire type two server nodes will hold all the same pages in each of them of all the websites available.

This system can provide service to users on five types of scenarios. The five types of scenarios are described below.

- Scenario one: all the users want the same page of the same website.

In this scenario, the system will fetch the copy of the all requested page from the type one or type two database server nodes. After fetching the copy, it will be stored on one server node on the Entity three: server cluster to store data temporary. next the single server node will copy the page among two other server nodes. Then each of those two server nodes will copy the page among two other server nodes . This process will continue with the two’s power factor iterations till the copy got copied to all the server nodes in this cluster-that is among N number of server clusters. Then those pages ae provided to the users.

- Scenario two: all the users want different pages of the same website.

The system will fetch all the different pages of the same website from the type two database server nodes and will provide to the users.

- Scenario three: all the users want same page of all different websites.

The system will fetch all the same pages of all different websites from the type one database server nodes and will provide to the users.

- Scenario four: all the users want different page from all different websites.

The system will fetch all the different pages of all different websites from the type one database server nodes and will provide to the users.

- Scenario five: the users requests for a page combination of all the above scenarios. (scenarios one to four)

The system will fetch the appropriate content from the appropriate server nodes and will duplicate the appropriate pages appropriate times among servers and then will provide the users with the pages they needed.