An Performance of Lookup in Cloudstack Infrastructures

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Abstract

This paper defines the infrastructure deployment in virtual network used in the data center. Deployment of cloud network management and storage services can be virtualized on open source cloud platform. This notable cloud environment ensures the real time networking and storage concept for efficient data store and data retrieval. Cloud environment consists of three entities to process the infrastructure such as cloud admin, cloud user, cloud server. In particular, the paper provides a how cloud services can deals on network virtualization and defines the storage management for retrieval of efficient data from cloud server. The data in the cloud are stored in the cloud server. The popular way for searching files by using quantify keyword- similarity based search. One of the significant is to ensure the performance of searching and retrieval data. There are several keyword search mechanisms for data retrieval. In the proposed system a quantifying keyword search is build so that more efficient data files can be fetch from the cloud server. The quantifying keyword similarity searches automatically generate a result so that the relevant data and performance can be improve and also privacy.

Keywords: Cloud computing, Network virtualization, cloudstack, management server, quantify keyword similarity search.

I. INTRODUCTION

Cloud stack can provide dashboard for a high compatible storage, compute, networking, load balancer, image management, and identity management. Overlay structured network is a network that can deployed on any other logical network environment. In overlay network nodes can be interconnected by logical links, which corresponds to a path, possibly through many physical links, in the elementary network. Cloud computing is widely used in distributed over the global environment and mobile computing environment. The significance of the location awareness about data in the cloud server is considered as a significant part in the cloud infrastructure since they are based on the on–demand networks [3]. Data centers are the essential parts of cloud computing. In a single data centre generally thousand of virtual servers run at any instance of time, hosting many tasks and at simultaneously the cloud system keep arriving the batches of task requests. Traditional approaches that are used for searching cannot be well in management server and it is affected by network latency and inability to reach the specified location of data. However in cloud, it is tolerable to find near best solution for searching data problem in cloud environment. Now-a-days all the packages developed by the software developer based on the cloud computing technology [1]. Cloud computing is an Internet computing with capable of share resources such as hardware, software, storage, network service with on-demand and dynamically, but most of the IT people does not pay attention to one point . This paper focuses on three entities such as cloud admin, cloud server, cloud user .The privileges can be provide to the cloud user based on some authorization and store their own data in cloud server by cloud admin [1, 2, 6, 9]. If user require a data they send search request to cloud server and file can be retrieve by quantify keyword similarity search method. 

II. OPENSOURCE CLOUD PLATFORMS

Table describes the comparison of open source cloud solution giving Infrastructure as a Service deploying cloud environment using cloudstack can be analysis from the above comparison table and cloud user &cloud user can easy use the interfaces in the cloudstack environment.

<table>
<thead>
<tr>
<th>Cloudstack</th>
<th>Eucalyptus</th>
<th>OpenNebula</th>
<th>OpenStack</th>
<th>Nimbus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apache cloud stack is java based project and provides an infrastructure as a service.</td>
<td>Eucalyptus is java and c based project and it provides storage as a service.</td>
<td>Open Nebula written in C++ , Ruby ,Java, Shell script, Yacc, Lex</td>
<td>Open stack written in python and provide infrastructure as a service</td>
<td>Nimbus written in Python and Java and provide infrastructure as a service.</td>
</tr>
<tr>
<td>Deploy with the hypervisor s such as Xen server, VMware ESXi with vSphere , Hyper-V</td>
<td>Deploy with the hypervisors such as KVM, Xen, VMwar e</td>
<td>Deploy on the hypervisors such as VMware, vCenter, Xen and KVM.</td>
<td>Deploy on the hypervisors such as VMware, KVM and Xen server.</td>
<td>It supports Xen and KVM.</td>
</tr>
</tbody>
</table>
III. EXISTING MODEL

In this existing model conjunction keyword search is introducing so that more efficient performance and relevant data search can be retrieved. In existing method search automatically generates a result so that the searching performance and efficiency can be improve. This will reduce the searching time and improving the efficiency by reducing time for index generation. The Problem leads to Index generation leads to comprise user privacy and Indexing more time costly.

IV. ARCHITECTURE OVERVIEW

Figure 1 Describes the Architecture Overview of the Retrieval of data from Cloud environment by using quantifying keyword similarity Search Method and store a data in organized tree structure model in the cloud environment. Management server can manages the virtual instances, database, networking and virtualized server.web application is created for data owner and provider login and validating the data user details in java scripts and Servlet &JSP can be used in server side.Net Beans for development environment with Java framework.

V. PROPOSED MODEL

Instead of indexing, creating the distance editing in the conjunctive keywords in the proposed system with quantify the keywords similarity method and construct an efficient technique for build keyword set with cloud environment ,which focus on reducing the search and retrieval overheads. The advantage of this technique is to reduce the indexing time and provides effective result.

VI. IMPLEMENTATION

In implementation system has three major entities such as data file uploading, storage and file retrieval. When a file is uploaded over the cloud server, then our algorithm organizes them in a tree structure and fetches the data efficiently by using quantify search similarity algorithm [9]. Data repetition is prevented for similar hashes which efficiently handles the memory occupancy. Searching the file or a keyword can be applied using an advanced tree structure and the system is designed and implemented in the following sequences,

- Management server installation for cloud infrastructure.
- Build Searchable Index and Outsourcing Data to Cloud provider.
- Efficient Data Retrieval.

VII. MANAGEMENT SERVER

The cloud platform deployment model based on the single server node, [4] which can be used to deploy the web interface for cloud administrators and reference user interface for end user. Managing the API interfaces and allocation of storage to guest as virtual disk [1]. The open sources clouds platforms environments have compared above to differentiate the usage of cloud software’s and describe how to store user data in storage management with virtualized servers. Single Management Server is considered for implementation i.e., cloudstack environment [9]. The management server manages all the cloud resources .The cloudstack is mostly based on python or java application model running on Tomcat, Mysql. It consists of management server, manages virtual instances to hosts, storage and assigns IP address to the virtual machine [5].
Figure 2 describes the cloud environment with its management server structure.

Implementing the similarity search algorithm and its fuzzy set is wanted to insert [9].

1. Cloud user search can be entered and store it on the node which is a host.
2. Each entered keyword can be used to search until it reaches -1.
3. The data stored in the cloud server can be given an individual identity.
4. Using similarity and unique request identity can access the require data from the cloud server.
5. The request can be sending through the service provider to cloud server and manages by the cloud administrator.

The substitution method can be used for the following keyword APPLE :{ AAPPLE, CPPLE, MAPPLE, YASTLE, ZAPPLE}. For each keyword contains an exact index and fuzzy pointers [13]. The pointer FUZZY1 contains the offsets of the fuzzy set generated by applying QUANTIFY keyword search similarity method with edit distance 1. FUZZY2 contains the offsets of fuzzy set generated by conjunction algorithm. Exact field contains the FID of corresponding file. Now the users search for a data the search request that is the input query.”APPLE”, can be fetch from cloud server by the conjunction keyword techniques by edit distance. To overcome the search time cost from existing system using a quantify search similarity algorithm using unique identity request. The file retrieval and file upload can be beneficial for network resource terminals with its cloud environment.

Algorithm: Quantify Keyword Search Similarity
1. Create an FSet (wi, di)
2. Check if di > 1 then
3. Call an FSet (w, di−1);
4. end if
5. check if di = 0 then//set distance set as wi//
6. Set S ′wi, di={ wi};
7. else//check again for relevant reterival//
8. using an loop to examine the exact data for (k ←1 to|S′w|, di−1)| do
9. for dw← 1 to 2*| S′wi, di−1[k]|+ 1do
10: check if dw is odd then go to step 11
11: Set fword as S′ w i ,di − 1 [k];
12: Insert at any position [(dw+ 1)/2];
13: else
14: Set fword as S′ w i, di − 1 [ k ];//set the data index as [-1]/
15: Replace [dw/2]-th character with•;
16: end if
17: check if fword is not in S′wi,di−1then
18: Set S′wi,di=S′wi, di∪{fword};
19: end if
20: end for
21: end for
22: end if
23: end procedure
24: end procedure

VIII. PERFORMANCE ANALYSES
Consider that about 5 users are using cloud services such as uploading, accessing their data and security by using a conjunction method, fuzzy keyword search method with edit distance, similarity search method with unique identity based on user request. It can be examine with setup of management server which is a cloudstack dashboard and apply search concept in the server side. Consider the host interconnected by the cluster and managed by the primary storage. Host act as a single server.

Figure 3 conjunction keyword based algorithm
Figure 3 describes that X-axis is to denote Time period in milliseconds and Y –axis is to denote the efficiency on exist model of fuzzy keyword set In this existing model conjunction keyword search is introducing so that more efficient performance and relevant data search can be retrieved. In existing method search automatically generates a result so that the searching performance and efficiency can be improve. This will reduce the searching time and improving the efficiency by reducing time for index generation. The Problem leads to Index generation leads to comprise user privacy and Indexing more time costly.

Figure 3 conjunction keyword based algorithm

Hypervisors
Management server
Management GUI +Mysql database
Local storage (NFS)
Hypervisors
Figure 4 describes that X-axis to denote time period in milliseconds and Y-axis to denote the efficiency of retrieval, upload and security over an encrypted file and request.

Figure 4 Fuzzy Search of edit distance

Figure 5 describes that X-axis to denote time period and Y-axis to denote the efficiency of retrieval, upload and using unique identity request in the proposed model instead of indexing, creating the distance editing in the conjunctive keyword in the proposed system with quantify the keywords similarity method and construct an efficient technique for build keyword set with cloud environment, which focus on reducing the search and retrieval overheads. The advantage of this technique is to reduce the indexing time and provides effective result.

IX. CONCLUSIONS

Searching and retrieving the relevant data from the cloud is one of the main challenges in the cloud computing scenario. Here it is introduced an enhanced algorithm for searching and retrieving the data by using quantifying search similarity method. It automatically generates result according to the relevancy of the file stored in cloud server. It is ensured that the proposed system retrieves highly relevant data by more efficient search with compromising privacy.

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