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Multi Cloud With Big Data For Secured Multi Purpose Smart Card Authentication Using RFID

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ABSTRACT

The Cloud based Large Scale Big Data integration is still in Research Purpose. That too Cross Cloud is the most complex integration. So, propose a privacy-aware cross-cloud service composition method, named Hire Some-II and auto update system. The Cross Cloud is implemented by assigning Tasks to the various services. Different Tasks can be attained by different Cloud based on its availability. Also integrate Big Data in this Project. K-means algorithm is introduced into our method as a data filtering tool to select representative history records. Cloud computing used to reducing the cost, greater flexibility, elasticity and optimal resources utilization. Big data used to improve decision making and information is stored in many different system. Deploy Two Cloud Servers (Drop Box & Google drive) and one Big Data Database Storage (Mango DB). Also, Deploy Multi Access Smart Card to Ration, Passport & Hospital system for User Access. Entire data's are separated and stored in two servers parallel.

Keywords: Hire some-II, K-means, Drop Box, Google drive & Mango DB.

1 INTRODUCTION

Cloud Computing and big data receives enormous attention internationally due to various business-driven promises and expectations such as upfront IT costs, a faster time to market, and opportunities for creating value-add business[1],[2],[3]. As the latest computing paradigm, cloud is characterized by delivering hardware and software resources as virtualized services by which users are free from the burden of acquiring the low level system administration details. Cloud computing promises a scalable infrastructure for processing big data applications such as the analysis of huge amount of medical data . Currently, Cloud providers including Amazon b Services (AWS), Sales force. com, or Google App Engine, give users the options to deploy their application over a network of a nearly infinite resource pool[7],[8]. By leveraging Cloud services to host b, big data applications can benefit from cloud advantages such as elasticity, pay-per-use, and abundance of resources with practically no capital investment and modest operating cost proportional to actual use.

In practice, to satisfy different security and privacy requirements, cloud environments usually consist of public clouds, private clouds and hybrid clouds, which lead a rich ecosystem in big data applications. Generally, current implementations of public clouds mainly focus on providing easily scaled-up and scaled-down computing poor and storage. If data centers or domain specific services center tend to avoid or delay migrations of themselves to the public cloud due to multiple hurdles, from risks and costs to security issues and service level expectations, they often provide their services in the form of private cloud or local service host[10],[11],[12]. For a complex b-based application, it probably covers some public clouds, private clouds or some local service host For instance, the healthcare cloud service, a big data

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application illustrated in, involves many participants like governments, hospitals, pharmaceutical research centre's and end users.

As a result, a healthcare application often covers a series of services respectively derived from public cloud, private cloud and local host. In practice, some big data centers or software services cannot be migrated into a public cloud due to some security and privacy issues .If ab-based application covers some public cloud services, private cloud services and local b services in a hybrid way, cross-cloud.collaboration is an ambition for promoting complex b based applications in the form of dynamic alliance for value-add applications . It needs a unique distributed computing model in a network-aware business context[15],[16]. cross-cloud service composition provides a concrete approach capable for large-scale big data processing. Existing (global) analysis techniques for service composition, hover, often mandate every participant service provider to unveil the details of services for network-aware service composition, especially the QOS information of the services. Unfortunately, such an analysis is infeasible when a private cloud or a local host refuses to disclose all its service in detail for privacy or business reasons. In such a scenario, it is a challenge to integrate services from a private cloud or local host with public cloud services such as Amazon EC2 and SQS for building scalable and secure systems in the form of mash ups. As the diversity of Cloud services is highly available today, the complexity of potential cross-cloud compositions requires new composition and aggregation models.

On the other hand, as a cloud often hosts a lot of individual services, cross-cloud and on-line service composition is heavily time-consuming for big data applications. It always challenges the efficiency of service composition development on Internet[21],[22]. Besides, for a b service which is not a cloud service and its bandwidth probably fails to match to the cloud, it is a challenge to trade off the bandwidth between the b service and the cloud in a scaled-up or scaled-down way for a cross-cloud composition application.

Here, the time cost is heavy for cross-platform service composition. With these observations, it is a challenge to tradeoff the privacy and the time cost in cross-cloud service composition for processing big data applications. In view of this challenge, an enhanced History record-based Service optimization method named Hire Some-II, is presented in this paper for privacy-aware cross-cloud service composition for big data applications. In our previous work, a similar method, named Hire Some (could be treated as Hire Some-I) has been investigated, which aims at enhancing the credibility of service composition. Hire Some-I is incapable of dealing with the privacy issue in cross-cloud service composition. Compared to Hire Some-I, Hire Some-II greatly speeds up the process of selecting a (near-to-) optimal service composition plan, and protects the privacy of a cloud service for cross-cloud service composition.

2 PROBLEM STATEMENT

That too Cross Cloud is the most complex integration. High time consuming process in the cross cloud environment. It can effectively promote cross cloud service composition in the situation where a cloud refuses to disclose all details of its service transaction records for business privacy issues in cross-cloud scenario. The complexity of potential compositions of cloud services calls for new composition and aggregation methods, especially when some private clouds refuse to disclose all details of their service transaction records due to business privacy concerns in cross-cloud scenarios.

3 THE SYSTEM ARCHITECTURE

The two Cloud Servers (Drop Box and Google drive) and one Big Data Database Storage (Mango DB) can be deployed in the Multi Access Smart Card Application.The Multi Access Smart Card Application involves the following process such as Ration, Passport &Hospital Applications for User Access. Under the User Personal Authentication, it includes User Name, Password, Primary Key and RFID Card are all stored and Verified in Mango DB. The entire data was separated and stored in two servers parallel. User Request is handled by the first Cloud and balance part is handled by another cloud in all application. The user will access the server by

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using the query which was already provided in default manner.

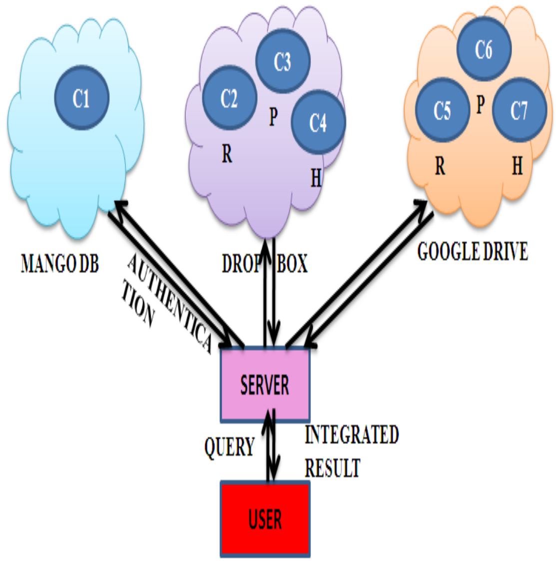

Fig 1.Multi-cloud Architecture

According To That, The Optimization Process Is Performed In Seven Steps:

- User Interface
- Mongo DB setup
- Google Drive and drop box
- Big Data Setup
- RFID Authentication and user credentials
- Data poisoning
- Cross Cloud retrieval

User Interface

First the User wants to create an account and then only they are allocated to access the Network. Once the User creates an account, they are to login into their account and request the Job from the Service Provider. Based on the User's request, the Service Provider will process the User requested Job and respond to them. All the User details will be stored in the Database of the Data Service Provider. In this Project, will design the User Interface Frame to Communicate with the Data Server through Network Coding using the programming Languages. By sending the request to Server Provider, the User can access the requested data if they authenticated by the Server.

Mongo DB setup

Mongo DB (from humongous) is a cross-platform document-oriented database. Classified as a no SQL database, Mongo DB eschews the traditional table-based relational database structure making the integration of data in certain types of applications easier and faster. Released under a combination.

Google Drive and drop box

To deploy the two real time cloud one is drop box and another one is Google drive, create an swing like application for the integration of cloud both Google drive and drop box, through the application the user get the registered and login to access the real time cloud .in this module all the user information are stored and kept in the above mentioned clouds.

Big Data Setup

Big data is an all-encompassing term for any collection of data sets so large and complex that it becomes difficult to process using traditional data processing applications. The challenges include analysis, capture, duration, search, sharing, storage, transfer, visualization, and privacy violations. The trend to larger data sets is due to the additional information derivable from analysis of a single large set of related data, as compared to separate smaller sets with the same total amount of data, allowing correlations to be found to "spot business trends, prevent diseases, combat crime and so on. So can implement big data in our project because every employ has an instructed information so can make analysis on this data.

RFID Authentication and user credentials

Client is an application which created and installed in the User's machine. So that can perform the activities. The Application First Page Consist of the User registration Process. Hire II create the User Login Page by RFID and Text Field password to the server. While creating username and password the

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RFID is stored in the database. Application, have to design an page to authenticate the RFID to entry into the clouds.

Data poisoning

To implement a concept that user will have the ration card, hospital and passport or organization will maintain the information both private and public data .so employee may contain private like customer id, customer name ,salary and the loan applied and loan go and public data like email id and phone number. But poisoning is the goal of the attacker to destroy or stealing client data. Plan to put the relevant data in the two cloud.

Cross Cloud retrieval

Cloud Service Provider will contain the large amount of data in their Data Storage. Also the Cloud Service provider will maintain the all the User information to authenticate the User when are login into their account. The User information will be stored in the Database of the Cloud Service Provider. Also the Cloud Server will redirect the User requested job to the Resource Assigning Module to process the User requested Job. The Request of all the Users will process by the Resource Assigning Module. To communicate with the Client and the with the other modules of the Cloud Network, the Cloud Server will establish connection beten them. For this purpose are going to create an User Interface Frame. Also the Cloud Service Provider will send the User Job request to the Resource Assign Module in Fist in First out (FIFO) manner.

4 HIRESOME-II

In our method, a tree structure is recruited to specify the service composition context. Concretely, a Task-Service tree is defined to incorporate a task and a group of candidate services into an integrated application context. Here, the candidate services are the qualified services that can fulfill the task execution's specification in functional and non-functional properties. In a Task-Service tree, for a candidate service, the QoS history records associated with its non-functional properties reflected in its past executions will be divided into two clusters by taking advantage of the ll-known k-means clustering algorithm introduced. Here, the k-means clustering algorithm is put into practice with k= 2 in our method. With these processes, two peer clusters and their representative history records can be selected respectively from these two clusters.

ALGORITHM

Evolving Process

Input: A candidate service WS and its history records set HR associated with its past performances.
Output: A tree in which WS plays as a root node and the two representative history records play as its leaf nodes.

If HR:size ≥ 2 then
{SubHR[1], SubHR[2]}← KMeansCluster[HR ,2];
//k - means(k =2) clustering algorithm;
//SubHR[1] and SubHR[2] are two clusters
For (i =1 to 2) do
If SubHR[i].size > 2 then
Rep –HR[i]←maxUtility(SubHR[i])
//Rep – HR[1] and Rep – HR[2] are two
representative
History
//records
Else
Rep – HR[i] ←SubHR[i].element
End if
WS:addChild(Rep –HR[i])
//Task-Service tree is evolved by adding a leaf
node
End for
Else
WS.addChild(HR.element)
End if

5 RELATED WORK

Service-Oriented Computing (SOC) enables the composition of services provided with varying Quality of Service (QoS) levels in a loosely coupled way. Selecting a set of services for a (near-) optimal composition plan in terms of QoS is crucial when many functionally equivalent services are available [16]. Therefore, service composition is a classic issue in service computing domain. Quality-aware composition of b services has been fully investigated in [18], [19], [20], [21], [22], to name a few.

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Technically, linear programming model is often recruited in service composition evaluation [19], [22]. In practice, various composition styles, e.g., sequential, parallel, alternative and loops can be engaged in a composition plan. In this paper, focus on investigating the sequential composition model, as other styles can be reduced or transformed into the sequential model by present mature techniques as mentioned in[19]. Generally speaking, service composition is promoted in an open b environment. For a private cloud, the privacy and security are crucial issues in cloud service access. It often leads to an awkward situation that some QoS information may be unavailable in cross-cloud composition evaluation. It is just the reason that although it is assumed that the history records can be obtained through some monitoring mechanism, there is few general QoS dataset widely recruited for testing the performance and accuracy of history record-aware service composition as mentioned in [22].

Concretely, our approach differs from the above approaches in three respects:

1) The k-means algorithm is implemented inside a cloud, and only a few representative history records are engaged in composition evaluation. It protect the privacy of a cloud, as the method does not require the cloud to unveil all its cloud services' QoS information, while in [18], [19], [20], etc., the composition approaches did not take into account of the privacy issues, and held the assumption that all the QoS information can be available.

2) The tree mechanism presented in this paper is similar to the tree mechanism presented in [22]. Hover, our tree mechanism is promoted by imposing k-means algorithm on history records, while the tree mechanism presented in [22] is set up by imposing skyline queries on candidate b-services. Besides, in [22], the tree mechanism is initiated by a binary tree; while our tree mechanism is initiated by a Task-Service tree, which is a multifork tree and is more compatible for real life systems.

3) Compared to its previous version investigated in [23], HireSome-II not only protects the privacy of a cloud service for cross-cloud service composition, but also greatly speeds up the calculating process for selecting a (near-to-) optimal service composition plan with higher optimality and precision. It is suitable for developing a cross-cloud service composition plan over big data of history records with privacy consideration.

6 FUTURE ENHANCEMENT

In future work, plan to apply our method to some specific cloud systems for processing big data applications. Besides, as the privacy preservation for big data analysis, share and mining is a challenging research issue due to increasingly larger volume of datasets in cloud, also plan to investigate the scalability of privacy preservation in big data applications with cloud service access.

7 CONCLUSION

History record-based Service optimization method, named Hire Some-II based on the previous basic one of Hire Some-I, has been developed for privacy-aware cross-cloud service composition for processing big data applications. It can effectively promote cross cloud service composition in the situation where a cloud refuses to disclose all details of its service transaction records for business privacy issues in cross-cloud scenario. Our composition evaluation approach achieves two advantages. Firstly, our method significantly reduces the time complexity as only some representative history records are recruited, which is highly demanded for big data applications. Secondly, our method protects cloud privacy as a cloud is not required to unveil all of its transaction records, which accordingly protects privacy in big data.

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