International Journal of Technology and Engineering System (IJTES)
Vol 7. No.1 2015 Pp. 16-20
©gopalax Journals, Singapore
available at : www.ijcns.com
ISSN: 0976-1345

QOS BASED WEB SERVICE RECOMMENDATION AND IMPEDING MALICIOUS USERS

R.ANITHA[1] ,K.ANUSHA[2] , R.SARADHA[3] ,S.CHITRA[4], M.Tech.,
[4].*Assistant Professor, Dept of IT,*
MVIT, Puducherry.
[1.]Email:anithamit.4@gmail.com
,[2.]Email:kanusha3110@yahoo.com,[3.]Email:saradharajasekar@gmail.com,

ABSTRACT

Due to the web services heterogeneous nature, the definition of several XML-based standards to overcome platform and language dependence, web services have become an emerging and promising technology to design and build complex inter-enterprise applications out of single web-based software components by the way of providing qualified web services.The main motivation of this work is to recommend Web services to the user based on Qos information and location. Top five services are filtered and ranked based on user feedback. Malicious users are identified by providing continuous negative feedback even if problem got solved and unceasing negative feedback without responding to any notification through Fisel algorithm. Both positive and negative feedbacks are accumulated in feedback collector. Positive feedbacks are only used for recommending web services. Negative feedbacks are used to expose the malicious users using Fisel algorithm and then impeded. Our system recommends high quality web services to the users. By detecting and blocking the malicious users our system provides improved security.
KEYWORDS: Feedback,Fisel Algorithm, Malicious users,QoS information and location.

1 INTRODUCTION

Web services are regularly hailed by IT academics and practitioners for their capacity of developing business processes that can cross organization bound arise at run-time. According to the W3C, a Web service is a software application identified by a URI, whose interfaces and binding are capable of being defined, described, and discovered by XML artifacts and supports direct interactions with other software applications using XML based messages via Internet-based applications [1],[5]. Web service is a promising technology that allows constructing and sharing independent and autonomous software.

1.1 DEFINITION OF WEB SERVICE

Web service is a process of communication between the client and server over a network. It is a software function provided at a network address over the web with the service always on as in the concept of utility computing. Web service is mainly used for the interoperability, ubiquity and for the industry support. It will launch itself and independent in other platform. Web service involves B2B transactions between the provider and the publisher.

1.2 1.2 HISTORY OF WEB SERVICE

The term "Web Services" refers to the technologies that allow for making connections. Services are what you connect together using Web Services. A service is the endpoint of a connection. Also, a service has some type of underlying computer system that supports the connection offered. The combination of services—internaland external to an organization—make up a service-oriented architecture.The term *Web services* describes a standardized way of integrating Web-based applications using the XML, SOAP, WSDL and UDDI open standards over an Internet protocol

backbone. XML is used to tag the data, SOAP is used to transfer the data, WSDL is used for describing the services available and UDDI is used for listing what services are available. Used primarily as a means for businesses to communicate with each other and with clients, Web services allow organizations to communicate data without intimate knowledge of each other's IT systems behind the firewall.

1.3 WEB SERVICE MODEL

It involves three major entities namely:

- service provider
- service consumer
- service registry

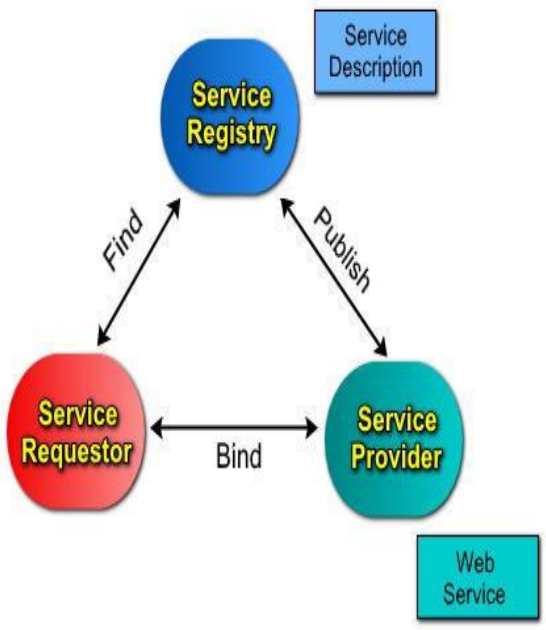

Figure 1.3: Web Service Architecture

SERVICE PROVIDER

Service provider includes It is used to implement the service and make it available on the internet.

SERVICE CONSUMER

Service consumer includes the request utilize an existing web service network and send an XML request.

SERVICE REGISTRY

Service registry involves an central place where the developer can publish new services and can find existing one.

The interactions involve the operations namely:

- Publish operations
- find operations
- bind operations

PUBLISH OPERATION

Publish operation is used to provide the details given by the service requester and publishes in the registry.

FIND OPERATION

Find operation is used for the service requester to retrieve a service description directly the service registry for the type of service required.

BIND OPERATION

Bind operation is used for the service requestor to invoke or initiate an interaction with the service at runtime.Thus Web Service Discovery is the process of finding a suitable Web Service for a given task.In our work it used to provide an qualified web services.Organisationof this work are given as follows:Section1,it deals with overview of work ,theSection2 deals with survey on related works,Section3 states about proposed methodology,Section4 deals with implementation mechanism that followed in module,Section5 concludes the work and Section6 listed with the references.

2 RELATED WORK.

A survey is used to gather information onindividuals. It may focus on factual information about individuals, and is often used to assess thoughts, opinions, and feelings. Survey can be specific and limited, or it can have more global, widespread goals. Today, survey is used by a variety of different groups.

Reputation measurement project that uses a novel reputation measurement approach for Web service recommendations.Web service recommendation systems can help service users to locate the right service from the large number of available Web services[2]. Avoiding recommending dishonest or

unsatisfactory services is a fundamental research problem in the design of Web service recommendation systems. Reputation of Web services is a widely-employed metric that determines whether the service should be recommended to a user[2]. The service reputation score is usually calculated using feedback ratings provided by users.

For a Web service, we address the reputation of a WS in terms of fulfillment of the required service (e.g., according to a Service Level Agreement), that was initially designed for P2P systems to the context of Web services.A Web service (WS) is a self-describing software application that can be advertised, located and used across the Web using a set of standards (WSDL, UDDI and SOAP) [13]. Service consumers are facing the challenge to select the most appropriate Web services among those offering the same functionality.

In this system a high-assurance applications such as traffic control, medical decision support, and coordinated response to civil emergencies, of special concern are NFRs having to do with security, safety and reliability of composite services[8]. In this paper we develop techniques for ensuring that a composite service meets the user-specified NFRs expressible in the form of hard constraints e.g., "response time has to be less than 5 minutes." We introduce an automata-based framework for verifying that a composite service satisfies the desired NFRs based on the known guarantees regarding the non-functional properties of the component services.

This system proposes a typology to classify trust and reputation systems using the three criteria, centralized or decentralized, person or resource, global or personalized[12].A trust and reputation mechanism is a mechanism using consumers' feedbacks to identify good services from bad ones. Compared with other approaches, it has more advantages in solving the selection problem for web services. The paper proposes a typology to classify trust and reputation systems using the three criteria, centralized or decentralized, person or resource, global or personalized. Inspired by the criteria, some potential research directions for web service selection are pointed out.

This paper addresses automatic service composition (ASC) as a means to create new value-added services dynamically and automatically from existing services in service-oriented architecture and computing environments[3].It involves four stages: planning an execution workflow, discovering services from a registry,and executingthe selected services. Thus shows a trustworthy reputation measurement of Web services and greatly improve the service recommendation process. The proposed prevention scheme can identify the malicious users with the words in feedback and block them using a Fisel algorithm.

3 PROPOSED METHODOLOGY

The main objective of the proposed system is to recommend web services to the user. Services are retrieved and ranked according to users location and Qos information along with feedback. Top five services are recommended to users. Each user is prompt to give compulsory feedback before logout. Malicious users are identified in two ways:1.providing continuous negative feedback even if problem got solved. 2. Unceasing negative feedback without responding to any notification through Fisel algorithm.Feedback are accumulated with both positive and negative feedback in feedback collector .Web services are recommended using positive feedback. Malicious users are impeded from usage of negative feedback and disabling the user from website. Our system recommends high quality web services to the users. By detecting and blocking the malicious users our system provides improved security.

ALGORITHM**:** Psuedocode to recommend the web service using feedback
INPUT**:**Words in the feedback
OUTPUT**:**Recommending web service

```
BEGIN
      GET WORD
  //retrieval of words from feedback
      SPLIT WORD → INDEX
      COMPARE(WORDS=THESAURUS)
 //comparing words with the thesaurus
REPEAT
      IF POSITIVE then
//recommending web services to the user
ELSE
         //blocking the user
    UNTIL
END
```

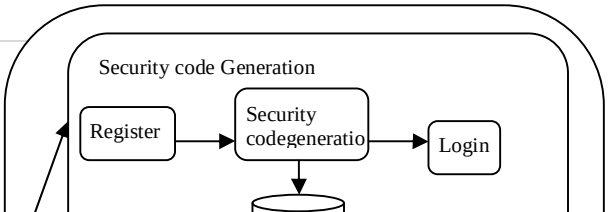

Figure 3 System Architecture

4.IMPLEMENTATION MECHANISM

SECURITY CODE GENERATION

New user has to register with the username, and password and mobile number. The security code will generate automatically with eight character in which six character contains lower case(a to z), upper case(A to Z) and numbers(0 to 9). From user name last two letters are taken and merge with six characters and again collaboration is done with eight characters. The security code generation will fully based on system speed. The security code will sent to the user mobile and email for continuous accessing. New security code will generated only for the requested user.

WEB SERVICES RECOMMENDATION

The existing user can access through username and security code. Web services arerecommended according to the user Qos and location information. Top five web services are ranked according to the feedback. The service are retrieved from database repository and provided to user. Ranking is also made with higher priority words. In this system feedbacks are asked to fill compulsorily and stored in the feedback collector.

MALICIOUS USERS DETECTION

After receiving feedback from the user the words are collected in feedback collector accommodated with both positive and negative feedback .Counting are made with both positive and negative words and positive counting are recommended for ranking then negative counting are verified by sending notification to the user and requested problem will be solved. The user can update feedback from negative to positive. Malicious users are identified in two ways:1.providing continuous negative feedback for three times even if problem got solved. 2. Unceasing negative feedback without responding to any of the notification .

5CONCLUSION

In this work, weare detecting malicious users with negative feedback and then impeded them from web services using a Fisel algorithm which helps to improves security.Our recommender system makes personalized service recommendation for users based on the feedback results and recommending web services to their Qos and location information. Our system recommends high quality web services to the users. By detecting and blocking the malicious users our system provides improved security.

6REFERENCES

[1] Xi Chen, ZibinZheng, Member, IEEE, Qi Yu, Member, IEEE, and Michael R. Lyu, Fellow, IEEE Web Service Recommendation via Exploiting Location and QoS Information
IEEE Transactions On Parallel And Distributed Systems, JULY 2014.
[2] Shangguang Wang, Member, IEEE, ZibinZheng, Member, IEEE, Zhengping Wu, Member, IEEE, Fangchun Yang, Member, IEEE, Michael R. Lyu, Fellow, IEEE
Reputation Measurement and Malicious Feedback Rating Prevention in Web Service
Recommendation Systems IEEE Transactions On Services Computing, March 2014.
[3] Incheon Palk, Wuhui Chen and Michael. A Scalable Architecture For Automatic Service Composition, IEEE Transaction On Services Computing,2014.

[4] Federica Paganelli and David Parlanti. A Dynamic Composition And Stubless Invocation Approach For Information-Providing Services,2013.
[5] Z. Maamar, N. Faci , K. Boukadi, Q. Sheng, L.Yao. Commitments to \regulate Social Web Services Operation. IEEE Transaction on Service Computing,2013.
[6] M. Alrifai, D. Skoutas, and T. Risse.Selecting Skyline Services for QoS-based Web Service Composition.In Proceedings of the 19th International World Wide Web Conference (WWW'2010), Raleigh, North Carolina, USA, 2010.
[7] S. Bansal, A. Bansal, and M. B. Blake. Trust-based Dynamic Web Service Composition Using Social Network Analysis. In Proceedings of the International Workshop on Business Applications for Social Network Analysis (BASNA'2010) held in conjunction with the Fourth International Conference on Internet Multimedia Systems Architecture and Applications (IMSAA'2010), Bangalore, India, 2010.
[8] Hongyu Sun, SamikBasu, VasantHonavar and Robyn. Lutz automata-based verification of security requirements of composite web services.IEEE International Symposium On Software Reliability Engineering, 2010.
[9] J. Al-Sharawneh and M.-A.Williams. A Social Network Approach in Semantic Web Services Selection using Follow the Leader Behavior. In Proceedings of the 13th Enterprise Distributed Object Computing Conference Workshops (EDOCW'2009), Auckland, New Zealand, 2009.
[10] E. Chang, T. Dillon, and F. K. Hussain. Trust and Reputation for Service-Oriented Environments.Wiley, 2006.
[11] B. Benatallah, Q. Z. Sheng, and M. Dumas.The Self-Serv Environment for Web Services Composition. IEEE Internet Computing,7(1), January/February 2003.
[12] Yao Wang, JulitaVassileva.Toward Trust and Reputation Based Web Service Selection: A Survey. Department Of Computer Science.
[13]LoubnaMekouar University of Waterloo Waterloo, Canada waterloo.ca .Youssef IraqiKhalifa University Sharjah, Trust WS: A Trust Management System for Web Services.