



Proposed model for Monitoring and Evaluation Users in Trusted Cloud

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Abstract

Consequently, whether that user behavior is trusted, how to evaluate user behavior trust is an important paper content in cloud computing". This paper Mainly discusses assessment significance of user conduct consider and assessment method," inside the cloud computing, along with consider object analysis, precept in comparing person behavior accept as true with, the basic idea of comparing person behavior believe, assessment strategy of conduct accept as true with for each technique, and long axis, which lay the theoretical basis about consider for the sensible cloud computing utility. In this paper i've proposed a believe version for the evaluation of the consumer degree believe in a cloud computing surroundings. I may be comparing the person degree believe for the programs hosted within the cloud environment. The user level agree with can be evaluated by using analyzing uncommon activities particular for finding accept as true with evidences that are cited inside the paper. The final effect of the user level trust evaluation can be used for figuring out the trustworthiness of the user". "however failing on one or parameters used for reading the trustworthiness can't finish the trustworthiness, or untrustworthiness of the person, but without a doubt it's going to assist in taking the uncommon user sports and also in identifying similarly plan of hobby. Further, I am planning to pack out the trust model in a public cloud environment".

Keywords: cloud; evaluation; SaaS; PaaS; IaaS; monitoring

1. Introduction

"At the same time, cloud computing can also cut down operating costs, improve operational efficiency. So many nations put the financial and material for the cloud computing".At that place are three forms of cloud services model, namely, Software as a Service (Sa

The cloud service providers (CSP) use the resources "provided by resource layer and their engineering science (such as Virtualization Technology) to comprise the cloud services, and through the information transport layer to supply these services to users".

"Consequently, whether that user behavior is trusted, how to evaluate user behavior trust is an important paper content in cloud computing. Mainly discusses evaluation importance of user behavior trust and evaluation strategy, in the cloud computing, including trust object analysis", principle in Evaluating user conduct accept as true with," the simple concept of evaluating person behavior consider, assessment approach of conduct believe for every method, and lengthy axis, which lay the theoretical basis approximately believe for the realistic cloud computing application".



Figure 1: Users and service providers in cloud computing

1.1. Objectives

With regards to this thesis topic "Monitoring and evaluation of users in a trusted cloud system" It was undertaken with the following objectives.

1. To make a cloud system that extends services to the users such as uploading and sharing files, mailing system and etc...
2. To provide another layer of security for registration by supplying a unique master id for each user.
3. To assess user behavior in the system developed.

2. Materials and Methods

Analysis Model ost important way to dissect the system is done examining the various models of it, which is as follow:-

- SDLC Methodologies

" It is intended for use by developers and will be the basic during the testing stage. Any changes made to the requirements in the future will have to go through formal change approval process".

- Waterfall Model MNBBNM

"Oftentimes considered the classic approach to the systems development life cycle, the waterfall model describes a development method that is linear and sequential".

"Waterfall approach was the first Process Model to be preceded and followed widely in Software Engineering to assure success of the task. In The Waterfall approach, the whole procedure of software development is broken up into separate process phases".

"The name waterfall portrays system progress flows from the summit to the bottom, like water flowing down. In comparison to

iterative models, the Waterfall model is seen as strict and linear—though it's preferred by many who feel iterative software development methodologies lack discipline. Although there are variations, in the true Waterfall model, the paper only moves from one phase to the next when a phase is filled out in its entirety". And then, no work will begin on the design phase until requirements analysis is resolved. Also, there is no room for backtracking, then when a phase is perfect it has to be right.

"Requirements analysis: This first step is also the most important, because it involves gathering information about what the customer needs".

"System & Software Design: Before a starting for actual coding, it is highly important to understand what we are going to create and what it should look like? It requires specifying the hardware and software architecture, determining performance and security parameters, designing data storage containers and constraints, choosing the IDE and programming language, and indicating strategies to deal with topics such as exception handling, resource management and interface connectivity".

"Implementation & Unit Testing: This step consists of actually constructing the product as per the design specification(s) developed in the previous step. The system is first cooked in small programs called units, which are contained in the following phase. Each unit is raised and tested for its functionality".

Testing: At this stage, each individual components and the integrated complete are methodically verified to make sure that they're mistakes-unfastened and fully meet the requirements mentioned inside the first step.

"Installation: The installation phase represents the steady state of the software on the computer. This step occurs once the merchandise has been tested and certified as fit for use, and involves preparing the scheme or product for induction and utilization at the customer site".

"Maintenance: The maintenance phase is the longest phase of the SDLC. In this phase the software is updated to":

1. Fulfill the changing customer need and adapt to accommodate change in the external environment.

2. Correct the errors previously undetected in the testing phase and enhance the efficiency of the software.

Advantages: "It allows for departmentalization and managerial control. A schedule can be set with deadlines for each stage of development and a product can proceed through the development process. Each phase of development proceeds in strict order, without any overlapping or iterative steps".

"Disadvantages: Developers are often delayed at certain phases and Real papers often follow the sequence. It does not allow for much reflection or revision. The client only sees the results after some time".

Paper of the System n the tractability of the uses the interface has been produced a graphic concept in mind, associated through a browser interface

"The functional or generic user interface facilitates the users upon the system in transactions through the existing information and needed services. The operational user interface as well helps the ordinary users in managing their own information helps the ordinary users in managing their own data in a customized manner as per the assisted flexibilities".

Software Requirements

- Windows OS.
- Apache Tomcat (web server)
- Java Development Kit 1.5+.
- Oracle.
- Adobe Dreamweaver (Web Developer). Java Scrip.

DFD Symbols

"Within the dfd, there are four symbols"

1. A rectangular defines a source (originator) or vacation spot of gadget information.
2. An arrow identifies facts flow. It's miles the line via which the records flows.

Three. Lots or a bubble represents a cognitive operation that transforms the incoming information circulate outgoing facts streams.

4. "an open rectangle is a facts store, records at rest or a transient repository of statistics".

Zero level DFD



Figure 3: Zero level DFD

1St Level DFD for Admin

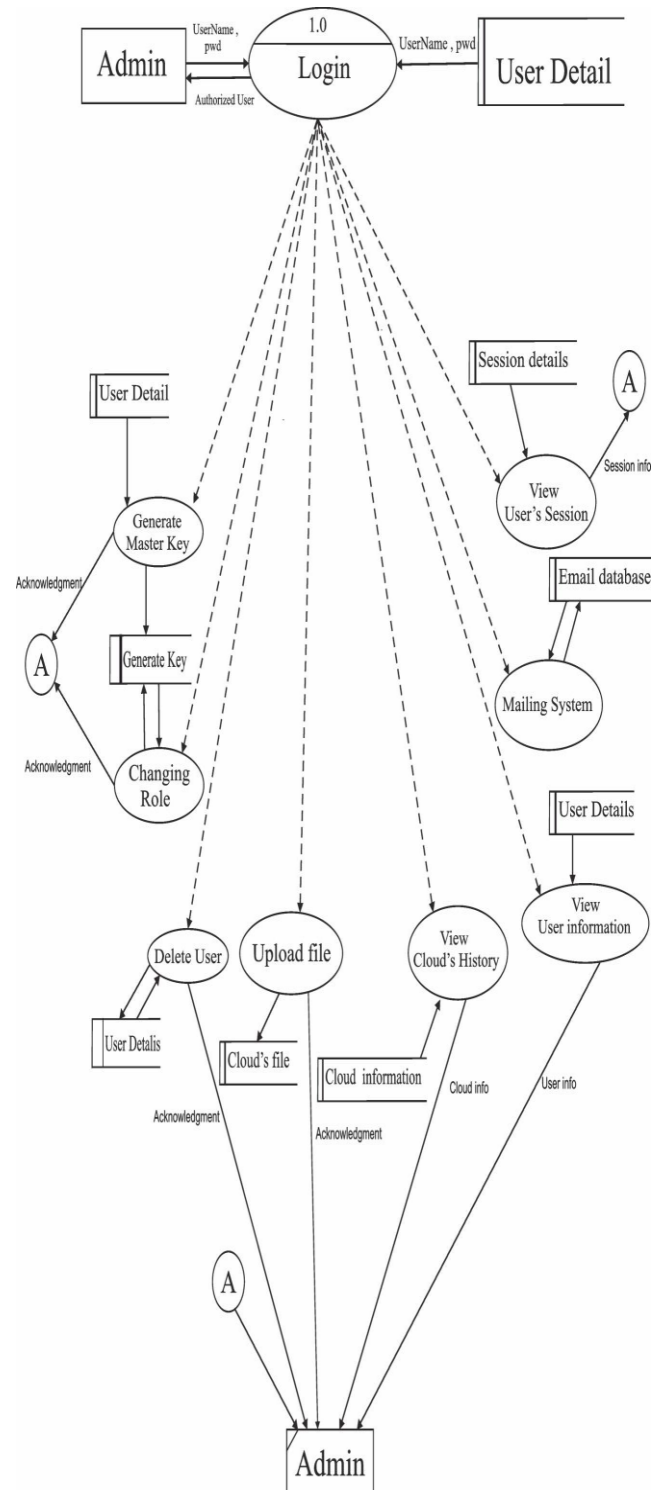


Figure 4 1: 1st Level DFD for Admin

1 St Level DFD for User Full access

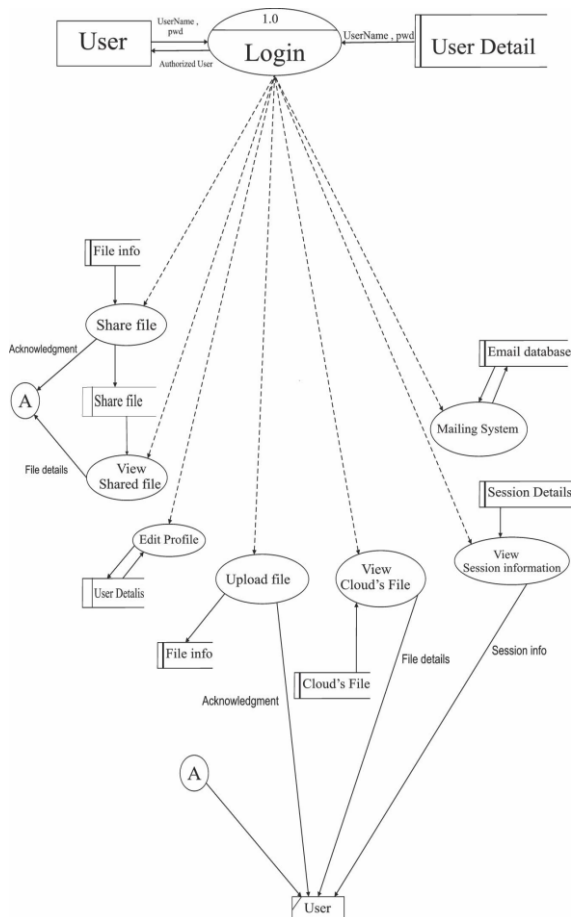


Figure 5 1: St Level DFD for full access user

1 St Level DFD for User Limited access

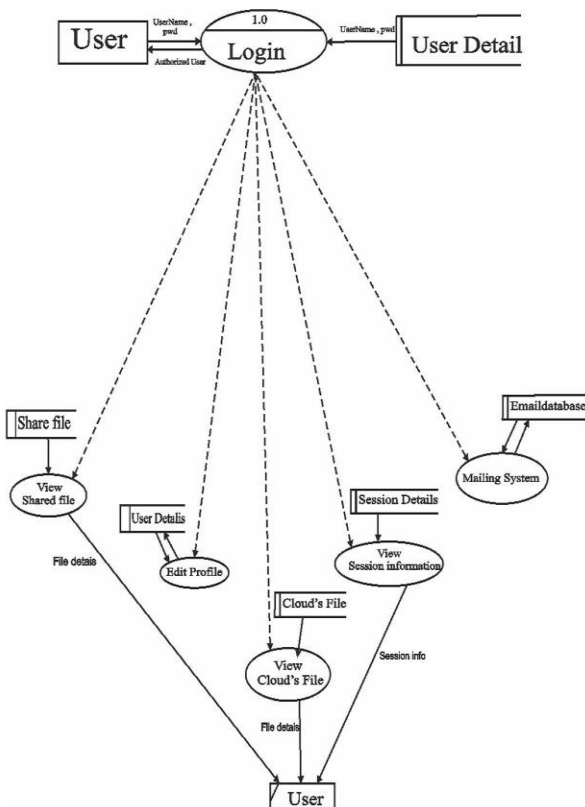


Figure6: 1St Level DFD for limited access user

Data Base Design : "Database design is the process of producing a detailed data model of a database. This logical data model contains all the needed logical and physical design choices and physical storage parameters needed to generate a design in a Data Definition Language, which can then be used to produce a database". A fully attributed statistics model consists of special attributes for each entity". . Within the important, and maximum effectively, it may be conceived of as the logical sample of the base facts structures applied to keep the data".

Determining Data to be Stored : "In a majority of cases, a person who is doing the design of a database is a person with expertise in the area of database design, rather than expertise in the domain from which the data to be stored is drawn e.g. Financial information, biological information etc. Therefore the data to be hoarded away in the database must be made up in cooperation with a person who does have expertise in that arena, and who is aware of what data must be stored within the system".

Types of Database Design

- Conceptual schema

"Once a database designer is aware of the data which is to be stored within the database, they must then determine where dependency is within the data. Sometimes when data is changed you can be converting other data that is non visible".

- Logically structuring data

"Once the relationships and dependencies amongst the various pieces of information have been determined, it is possible to arrange the data into a logical structure which can then be mapped into the storage objects supported by the database management system".

- Chatou design

"The physical design of the database specifies the physical configuration of the database on the storage media. This includes detailed specification of data elements, data types, indexing options and other parameters residing in the DBMS data dictionary". "The below tables re normalized to avoid any unusual people during the path of the data entry".

Admin information

Table 3.1: For admin

Column Name	Data Type	Nullable	Default	Primary Key
ADMIN_ID	VARCHAR2(30)	No	-	1
NAME	VARCHAR2(30)	No	-	-
PHONE_NO	NUMBER	No	-	-
EMAIL	VARCHAR2(40)	No	-	-
ADDRESS	VARCHAR2(80)	Yes	-	-
				1-5

User information

Table3. 2: For use

Column Name	Data Type	Nullable	Default	Primary Key
USERID	VARCHAR2(40)	No	-	1
NAME	VARCHAR2(40)	No	-	-
EMAIL	VARCHAR2(40)	No	-	-
PNO	NUMBER	No	-	-
ADDRESS	VARCHAR2(60)	Yes	-	-
				1-5

Generate Master ID

Table 3.3: For master

Column Name	Data Type	Nullable	Default	Primary Key
USERID	VARCHAR2(20)	No	-	1
MASTERID	VARCHAR2(60)	No	-	-
ROLE	VARCHAR2(60)	No	-	-
				1-3

Login

Table 3.4: For login

Column Name	Data Type	Nullable	Default	Primary Key
USERID	VARCHAR2(20)	No	-	1
PASSWORD	VARCHAR2(60)	No	-	-
TYPE	VARCHAR2(60)	No	-	-
				1-3

User session

Table 3.5: For user session

Column Name	Data Type	Nullable	Default	Primary Key
USERID	VARCHAR2(60)	No	-	-
LOGINTIME	VARCHAR2(60)	No	-	-
LOGOUTTIME	VARCHAR2(60)	No	-	-
IPADDRESS	VARCHAR2(60)	No	-	-
				1-4

User behavior

Table 3.6: For user behavior

Column Name	Data Type	Nullable	Default	Primary Key
USERID	VARCHAR2(60)	No	-	-
FILENAME	VARCHAR2(60)	No	-	-
FILEACTION	VARCHAR2(60)	No	-	-
DATE1	VARCHAR2(60)	No	-	-
				1-4

Mail

Table 3.7: For mail

Column Name	Data Type	Nullable	Default	Primary Key
FROMUSER	VARCHAR2(60)	No	-	-
TOUSER	VARCHAR2(60)	No	-	-
SUB	VARCHAR2(20)	Yes	-	-
MSG	VARCHAR2(55)	Yes	-	-
DATE1	VARCHAR2(30)	Yes	-	-
				1-5

Share file

Table 3.8: For share file

Column Name	Data Type	Nullable	Default	Primary Key
FROMUSER	VARCHAR2(60)	No	-	-
TOUSER	VARCHAR2(60)	No	-	-
FILENAME	VARCHAR2(60)	No	-	-
DATE1	VARCHAR2(40)	Yes	-	-
				1-4

Unified Modeling Languages (UML) Diagrams

"The unified modeling language allows the software engineer to express an analysis model using the modeling notation that is governed by a set of syntactic semantic and pragmatic rules".

"A. Each view is determined by a set of diagram, which is as follows".

User model view

- this view translates the gadget from the consumer's attitude.
- the evaluation, representation describes a usage situation from the end-customers perspective.

Structural version view

- on this model the information and capability are coming back from within the employer.
- this model view models the static structures.

Behavioral model view

- It represents the dynamic of behavioral as elements of the gadget, depicting the interactions of collection among severa structural factors defined within the purchaser model and structural model view.

Implementation mode view

"In this the structural and behavioral as parts of the system are represented as they are to be.

Environmental Model View

In this the structural and behavioral aspects of the surroundings in which the scheme is to be implemented are represented".

Uml is especially built via two distinct domains they are:

- uml evaluation, modeling, which concentrates at the consumer model and structural version views of the employer?

Actors are outside entities that engage with the system. Examples of actors include users like administrator, financial institution patron...And so forth., or any other machine like imperative database.

3. Results & Discussion

3.1. Results

Through Monitoring and evaluation of users in cloud computing environment system I obtain system that evaluate and trust the user behavior and user identity. Admin monitors user activity to evaluate its behavior in the system and to take suitable action for misuse of the cloud services. The system provides admin full authority to make the desirable action for any abnormal user activities, revoke privileges of uploading and sharing files, and deleting user, are actions done by admin in this cause. Rather than allocating memory for uploading files to the cloud, sharing files with friends and having access to cloud's files. The system also supplies the mailing system for the uses to communicate within the cloud.

3.2. Discussion

"In the index page any end user is allowed to register with the system. For cloud's safety another level of security is applied which is supplied by giving unique master id for every user which is utilized for registration. After mastering id is handed to the user

by an administrator." User can simply fill the specialized form which after validation "allows the user to register with the cloud because the user has a unique user id and master id and all data will be cached away in a database. After registration a user can Login, it acts as a gateway Interface which will afford the certification. It will allow or disallow the user". After that user can use cloud services such as mailing service, uploading files to the cloud, sharing files with friends, edit profile, rendering access to cloud's file and shared files and checking user's session. Unlike the normal cloud system in here we have to trust the user behavior are rather than the user identity. For assuring the user behavior are in the cloud we need to monitor some of the user actions in the horde. User's session, information, IP address that user had to login to the cloud, and cloud history or information that helps the admin to notice any abnormal activity in the cloud and to acquire the suitable decisions in order to figure out the problem. In case if any user misuses his service, admin can revoke some of user's privilege or delete the user for the cloud's safety.

4. Conclusion

"This Paper mainly discusses evaluation importance of user behavior trust and evaluation strategy in the cloud computing, including trust object analysis, principle in evaluating user behavior trust, the basic idea of evaluating user behavior trust, evaluation strategy of behavior trust for each access, and long axis, which laid the theoretical foundation of trust for the practical cloud computing application".

5. Future scope

"Cloud computing has recently emerged as a buzzword in distributed computing. Depending on the data value the importance of trust varies from organization to organization. Less the trust cloud provider has in the user, more it will try to canvass and control the activities of the user".

" The gadget evaluates the person stage accept as true with for the applications hosted in the cloud surroundings. . The man or woman degree believe can be evaluated through reading uncommon activities targeted for finding receive as actual with evidences which might be mentioned within the paper. Further, we are planning to perform the agree with version in a public cloud environment. Encoding of records for statistics safety and protection can be brought, and by using right implementation more services may be tallied to the constitution".

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