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## Privacy Preserving Auditing on Shopping mall Data Centre

Swathi H<sup>1</sup>, Sridhar SK<sup>2</sup>

M. Tech Student, Dept. of Computer Engineering, BITM, Ballari, Karnataka, India<sup>1</sup>

Assistant Professor, Dept. of Computer Engineering, BITM, Ballari, Karnataka, India<sup>2</sup>

**ABSTRACT:** VANET is a technology where vehicles in the network are used to get information for traffic management and transport. A survey shows that many customers spend their most of time during the weekends in different shopping mall in most of the Metropolitan cities .Hence the vehicles in parking place can be used for vehicular cloud computing. But some problems are faced in vehicular cloud computing. Firstly using of computing power at vehicles and managing of resources consumed payments. Secondly integrity of data must be achieved by auditing of data so that high risk of data corruption can be avoided in Vehicular cloud. In this paper effective solution for these problems is proposed. Auditing Server ensures that data storage in vehicles is integral. Binary tree structure and pre order traversal technique are used in this project to update client's secret keys. Scheduler manages the transfer of payment after successful execution. Incoming task is processed by the cloud task and resource scheduler. Dynamic key manage will manage the keys for vehicles in way to avoid the vehicles getting exposed to key exposure attacks.

**KEYWORDS:** Vehicular Cloud network, Scheduler; Dynamic key manage; Binary tree structure; pre order traversal technique.

### I. INTRODUCTION

Recent improvements in software, hardware and communication technologies enabled the designing and implementing of networks of several types are deployed in different environments Throughout the previous couple of years, one such system that has got much consideration is the Vehicular Ad-Hoc Network (VANET) . A VANET is an arrangement of moving vehicles in a remote system that apply the Information Communication Technology (ICT) to give best in class administrations of movement administration and transport[9]. Networks, which are anticipated to transform driving styles by creating a secure, safe and healthy environment that will ultimately encompass our busy city streets and highways. Thus, the intelligent vehicular networks will provide infotainment and will enable a new versatile system that enhances transportation efficiency and safety. Although many efforts have been made to reach these objectives, VANET has several drawbacks, such as the high cost of the service constrained communications due to the high mobility of the vehicle.To completely guarantee the information respectability and recovery the clients' calculation assets and also online weight, in this proposed an open evaluating plan for the recovering code-based distributed storage, in which the uprightness checking and recovery (of fizzled information pieces and authenticators) are actualized by an outsider evaluator and a semi-trusted intermediary independently for the benefit of the information proprietor.

### II. RELATED WORK

In the USA, the Federal Communications Commissions dispensed Dedicated Short Range Communications (DSRC) with a scope of 75 MHz of the range (5.850–5.925 GHz) in backing of vehicular systems administration (Hussain et al., 2012; Liu et al., 2009). Numerous distributed storage inspecting conventions like [1–8] have been proposed in light of this method. The security assurance of information is likewise an imperative part of distributed storage evaluating. To diminish the computational weight of the customer, an outsider examiner (TPA) is with help the customer to

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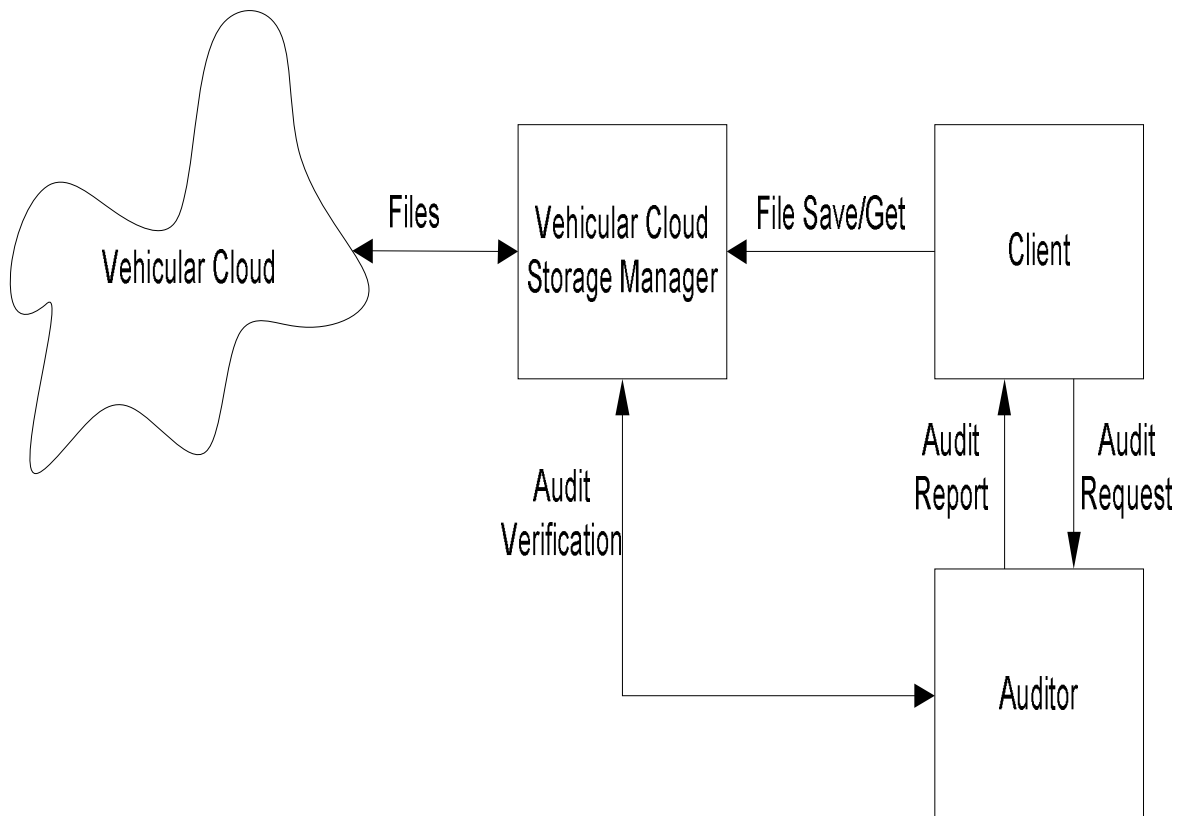
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occasionally check the honesty of the information in cloud. Be that as it may, it is feasible for the TPA to get the customer's information after it executes the evaluating convention numerous times. Examining conventions in [9, 10] are intended to guarantee the protection of the customer's information in cloud. Another angle having been tended to in distributed storage inspecting is the manner by which to support information dynamic operations. Wang et al. [11] have proposed a reviewing convention supporting completely dynamic information operations including modification, insertion and erasure. Recently, Eltoweissy et al. and Olariu et al. introduced the concept of a Vehicular Cloud (VC). Some vehicles are parked for long times or some vehicles are stuck in congested traffic and move slowly, in some wireless network, these vehicles alter their position. Finally, our cars may face dynamically fluctuating locations. In this case, the vehicles will help resolve municipal traffic management centres to resolve traffic incidents in a timely fashion for local consultants which is not possible with the municipal traffic management alone due to the lack of adequate computational resources. Survey says that most of the people during weekends spend their most of the time in shopping mall by parking cars for long time. So their vehicles can be used as storage place by using VCC concept.

### III. IMPLEMENTATION

System architecture is the conceptual design that defines the structure and behaviour of a system. An architecture description is a formal description of a system, organized in a way that supports reasoning about the structural properties of the system. It defines the system components or building blocks and provides a plan from which products can be procured, and systems developed, that will work together to implement the overall system.

The System architecture is shown below.





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The modules here are

- Vehicular Cloud is group of vehicles parked at shopping mall center keep their resources available if they willing for storage and task execution in vehicular cloud computing .It is available through Wi-Fi for clients. The components communicate by means of TCP to any vehicle in the Vehicular system.
- Vehicular Cloud Storage Manager is a dynamic key manager manages the key of vehicles and avoids keys of vehicles getting exposed to key exposure attacks .In this paper binary tree structure and the pre-order traversal technique are used for updating the secret keys for the client. Also a novel authenticator construction is developed to support the forward security and the property of blockless verifiability. To save the user's computation resources and to ensure the data integrity as well as online burden, public auditing scheme for the regenerating code based cloud storage is used.In this method third party auditor and semi trusted proxy implements integrity checking and regeneration on behalf of the data owner. Novel authenticator is used for appropriate regenerating of codes. Cloud Task and Resource scheduler will handle the requests. Task can be any applications like uploading or downloading audio, video etc. These tasks must be scheduled to computing resources at the vehicles. The vehicles will takes different prices for their cloud resource. So the aim of scheduler is to schedule the tasks in a optimum price and manage the payments transfer after task executes successfully[4].
- Client: Client can able to upload and download files from the vehicular storage manager .
- Auditor: Auditing Server will ensure the storage of data to vehicles when uploading and downloading of same data is not corrupted by any third party.

## IV. CONCLUSION

Finally this work concludes that by using Android Mobile phones and other components like Auditing Server, Key manager and Cloud task scheduler emulsion of Vehicular network is possible. TCP sockets are used for communication across all the components in Vehicular Network. Usage of computing power at vehicles based on the users wish and management of payments for the consumers for the resources consumed are done in this work. Public auditing scheme is used for data integrity. To save the users' computation resources and to ensure the fully data integrity as well as online burden a public auditing scheme for the regenerating-code-based cloud storage is proposed, in which regeneration of failed data blocks and authenticators and integrity checking are implemented by a third party auditor and a semi-trusted proxy separately on behalf of the data owner.

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## BIOGRAPHY

**Swathi .H** is a PG Scholar Studying in Ballari institute of Technology & Management, Ballari affiliated to VTU, Belagavi. She received her Bachelor of Engineering(BE) degree in 2014 from Ballari institute of Technology & Management.

**Sridhar S K** is an assistant professor at Ballari institute of Technology & Management, Ballari affiliated to VTU, Belagavi. He received his BE in information science & engineering and M.Tech in Digital Electronics from VTU, Belagavi in 2008 and 2012 respectively. He is the member of Wipro MTLC BITM and Infosys campus connect program. His current research interests include Cloud computing, Embedded Systems, SQA & Hacking technologies.