# A robust reputation management mechanism inthe federated cloud

## ABSTRACT:

In the Infrastructure as a Service (IaaS) paradigm of cloud computing, computational resources are available for rent.Although it offers a cost efficient solution to virtual network requirements, low trust on the rented computational resources preventsusers from using it. To reduce the cost, computational resources are shared, i.e., there exists multi-tenancy. As the communicationchannels and other computational resources are shared, it creates security and privacy issues. A user may not identify a trustworthyco-tenant as the users are anonymous. The user depends on the Cloud Provider (CP) to assign trustworthy co-tenants. But, it is in theCP's interest that it gets maximum utilization of its resources. Hence, it allows maximum co-tenancy irrespective of the behaviours ofusers. In this paper, we propose a robust reputation management mechanism that encourages the CPs in a federated cloud todifferentiate between good and malicious users and assign resources in such a way that they do not share resources. We show thecorrectness and the efficiency of the proposed reputation management system using analytical and experimental analysis.

## EXISTING SYSTEM:

- Existing RMMs for cloud computing gather feedback from users and aggregate them to obtain reputations for the CPs.

- It attempts to differentiate between fair feedback from unfair feedback provided by the users about the performance of the CPs.
- It also differentiates between faults in the physical networks and the intentional activities of CPs that lead to disruption in the physical network. Therefore, faults (which are assumed to be beyond the control of the CP) do not impact reputations of CPs
- X. Sun et.al. proposed a multi-faceted trust management model with the intention to distinguish between fair and unfair feedbacks about the cloud providers.
- M. Wang et.al also proposed a multi-faceted reputation management model that allows the users to evaluate the cloud providers using various features.
- J. Sidhu et.al. proposed a trust evaluation of the cloud providers based on the violation of contracts described in the service level agreement.
- M. Mac´ıas et.al proposed a mechanism to isolate unfair and malicious trust feedback in cloud computing.
- M. Macaset. Al. proposed a policy on reputation management that minimizes the impact of system failure on the reputation of the cloud providers

## DISADVANTAGES OF EXISTING SYSTEM:

- This mechanism is vulnerable where the service provider faces competition and may send unfair feedbacks about its competitors.
- This model assumes that seller agents act consistently, which might not be true in many cases.

## PROPOSED SYSTEM:

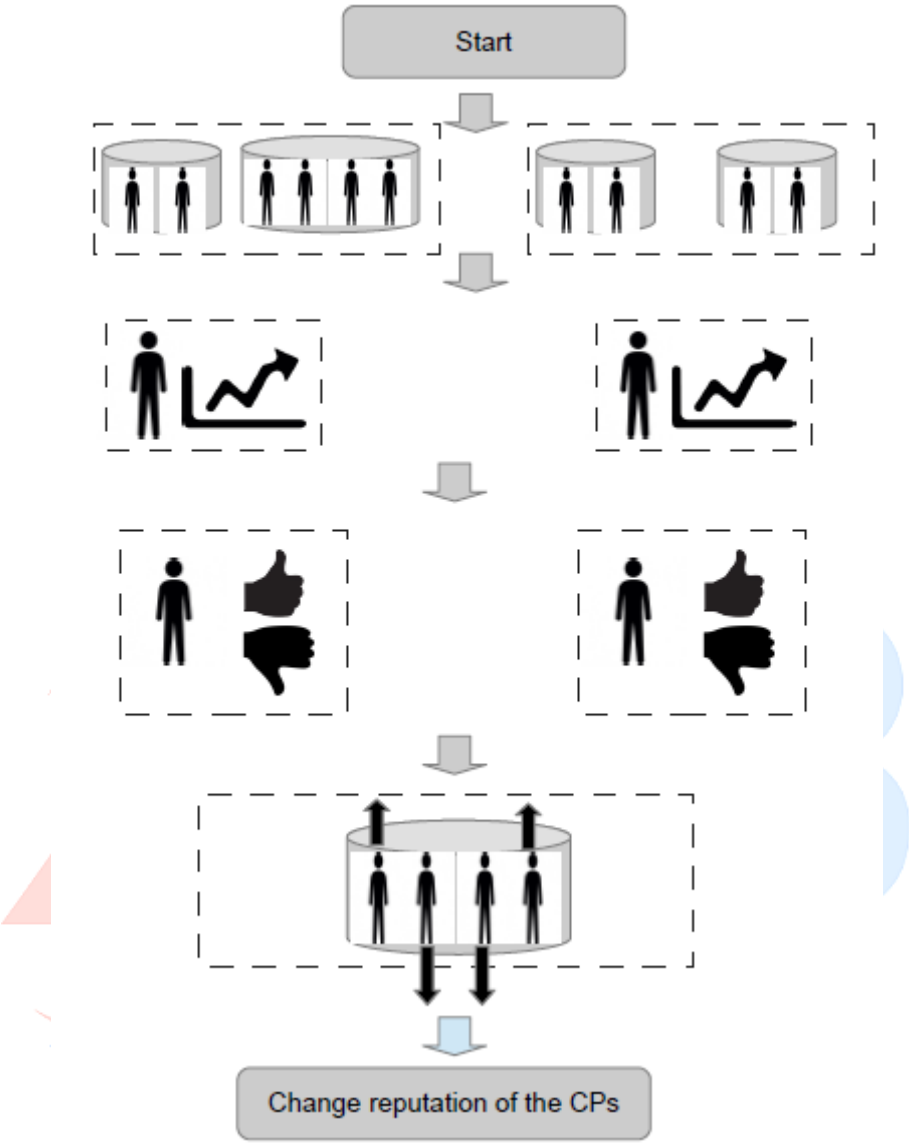
- In this paper, we propose a robust RMM in the federated cloud with focus on multi-tenancy. In a multi-tenant cloud, a user depends on the CP for trustworthy co-tenants.
- In this paper we propose a novel reputation management mechanism that encourages the CPs to assign good co-tenants to a good user.
- In this paper we propose a mechanismthat encourages CPs to report correct feedback about thecustomers.
- Briefly, our RMM works as follows:
- 1) First, each CP distinguishes malicious users from good users and it should assign resources to themsuch that the following holds:
    - a) It must not allow any malicious user to becomea co-tenant of a good user.
    - b) It may allow malicious users to share resourcesamong themselves.
- 2) Next, the CPs share information about multitenancies.
- 3) Each CP reports the behaviour of users to the RMM.
- 4) A CP's reputation is increased if the reputations of the users in each group of multi-tenant users are consistent, i.e., either their reputations increase ordecrease.

## ADVANTAGES OF PROPOSED SYSTEM:

- In this paper we propose aRMM with a focus on multi-tenancy. Sharing computationalresources with others is the main concern of users as otherco-tenants may be malicious.
- In this paper, we propose a RMM that considers the CP's capability and willingness to make such differentiation among its users.

- It allows maximum co-tenancy irrespective of the behaviours of the users

## SYSTEM ARCHITECTURE:




## SYSTEM REQUIREMENTS:

## HARDWARE REQUIREMENTS:

- System : Pentium Dual Core.
- Hard Disk : 120 GB.

- Monitor : 15'' LED
- Input Devices : Keyboard, Mouse
- Ram : 1 GB

## SOFTWARE REQUIREMENTS:

- Operating system : Windows 7.
- Coding Language : JAVA/J2EE
- Tool : Netbeans 7.2.1
- Database : MYSQL

## REFERENCE:

Subhasis Thakur, John G. Breslin, "A robust reputation management mechanism inthe federated cloud", **IEEETransactions on Cloud Computing, 2017.**