Abstract

Now Cloud Computing has achieved formidable impetus where IT infrastructures and applications are provided as service to end users. It provides shared pool of resources in addition with Data storage, computer processing power and specialized corporate and user applications. Users can access Cloud services any time anywhere and store large amount of data from anywhere, due to increases the popularity of Cloud computing there is risk of Security. Data which is stored on cloud may be vulnerable which is easy for attackers to compromise the virtual machines as zombies and explore these vulnerabilities in cloud system. Because when we move data or information in cloud we do not have any control on that data which can be handling by third party. Hence, there is the vital requirement of more security measures to protect cloud. In this paper we propose an Intrusion detection system which is based on Entropy variation and J48 Decision tree algorithm through which we can detect or prevent vulnerable virtual machines, Data center and Host from being compromised in the cloud also we can protect data and applications in Cloud like wide area network traffic. This proposed solution results gives more accuracy for attack detection and low false alarm rate. For simulation we use Cloud Sim (version 3. 1) and used KDDCUP ‘99 Dataset to evaluate rules and testing datasets to detect intrusion.
Entropy Variation and J48 Algorithm based Intrusion Detection System for Cloud Computing

References

- Mr. Prashant Rewagad, Ms. Yogita Pawar, "Use of Digital Signature with Diffie Hellman Key Exchange and AES Encryption Algorithm to Enhance Data Security in Cloud Computing", 2013 International Conference on Communication Systems and Network Technologies
- Uma Somani, Kanika Lakhani, Manish Mundra, "Implementing Digital Signature with RSA Encryption Algorithm to Enhance the Data Security of Cloud in Cloud Computing", 1st International Conference on Parallel, Distributed and Grid Computing (PDGC - 2010)

**Index Terms**

Computer Science  
Security

**Keywords**

Attacks and Security issues in Cloud  
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J48 Algorithm  
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Cloud Sim.