

Chapter 60

Rule Learning Algorithm for Detection of Malicious User in Cloud Environment



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60.1 Introduction

Cloud computing is a virtual infrastructure that provides shared communication technology services and information for multiple external users via the Internet. It provides an access to the shared resources on demand. Cloud computing is increasingly becoming a highly demanded service as it provides low-cost services and high computational power. It also increases accessibility and availability. A growth rate of 50% is being experienced by cloud providers. Recently the use of cloud computing has gain momentum in IT area. It delivers wide range of services like storage, computational platform, and computational power. Google, IBM, Salesforce, Microsoft, and Amazon are currently major cloud providers.

Organizations are continually embracing the advantages provided by cloud computing platforms like flexibility and scalability. Security is often considered to be one of their top concerns. Insider threat is becoming a very serious challenge, both to cloud computing and data security in general [1–3]. The insider who is actually malicious can hold details of the major amount of information that are really important. Due to the huge amount of threat that is posed by the insiders, in rapidly growing cloud computing [4] ecosystem, the insider attack researches in the cloud paradigm are gaining importance (Fig. 60.1).

Issues related to security in cloud paradigm: The flexibility ease and power also has lots of security challenges. IT company that does not regularly update their security policy can be vulnerable to security breaches. In cloud computing,

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