

Chapter 11 A Study on Data Leakage Challenges in Cloud Environment

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Abstract

Cloud computing is an emerging field of computing that provides on-demand access to resources over the Internet. Cloud computing is a popular option for people and businesses for a number of reasons including cost savings, increased productivity, speed and efficiency and performance. All size of organizations are adopting this technology due to large range of benefits. However, cloud computing has many issues. Security risks of cloud computing have become the top concern in 2021, out of which data leakage is the most severe one. The paper provides a wide-ranging understanding of data leakage problem in cloud computing. It analyzes the risk, challenges and proposes research directions in the cloud computing field.

Keywords: Cloud Computing, Data Leakage, Information Security, Cloud Security.

1. Introduction

Cloud computing is a platform that provides on-demand access different resources and services over the Internet. There are three primary service models such as Software-as-a-Service (SaaS), Platform-as-a-Service (PaaS) and Infrastructure-as-a-Service (IaaS) to offer computing resources. SaaS allow the customer to run the application software that is available via third party to fulfill the data handling needs of any organization. In PaaS hardware and software platforms are offered as services to organizations based on their need. In IaaS, computer hardware infrastructure such as virtualization, elastic computing, storage and networking etc. are provided as service to the customers. Similarly, there are four deployment models such as public cloud, private cloud, community cloud and hybrid cloud using which the services are offered to the customer. Cloud computing provides services to collect logs and metrics of used services with an objective to reduce overheads on computing