I. Introduction to Cloud Computing and Cybersecurity Threats

Cloud computing has completely revolutionized the way modern organizations operate, offering greater accessibility to data and applications while enabling scalability and efficiency. The global cloud computing market is predicted to reach USD 1,251.09 billion in 2028 [1]. However, this innovation does not come without its own set of security challenges; thus, there is a need to adopt new cybersecurity solutions to better safeguard against threats in cloud computing [2]. Cloud infrastructure can sometimes fall prey to attacks, and while cloud computing companies insist on their highly encrypted and secure software, users can unknowingly make errors that can cause data exposure [1]. Organizations, therefore, need to become aware of cloud computing threats in order to secure their cloud environment against malicious actors.

Cloud security threats include malware, ransomware, phishing attacks, and denial of service attacks, among other things . An alarming statistic reveals that 80% of companies have experienced at least one cloud security incident in the last year, while 27% have experienced a public cloud security incident (up 10% from the previous year) . Typical security threats in cloud computing include unauthorized access, misconfiguration, lack of visibility, insecure interfaces, and external data sharing or human error [3]. Unfortunately, organizations can still struggle to understand their responsibilities versus those of the cloud service provider, particularly when it comes to security . The Cloud Security Alliance (CSA), an organization concerned with cloud computing security, has identified 25 security threats, but narrowed it down to the top 11 . The latest CSA report revealed that six of the 11 top threats were new to the list [4]. It is critical for an organization to be familiar with these threats, which are not the sole responsibility of the cloud service provider but rather the shared responsibility of both the customer and provider.

To counteract these threats, cybersecurity measures in cloud computing are imperative, and preventive security is the best approach [1]. Such measures may include implementing security policies, installing protection software and hiring professionals to keep cloud infrastructure secure. Finally, a list of the most common cloud computing security threats can be an excellent place for IT support service providers to start addressing the section entitled "Overview of Cybersecurity Threats faced in Cloud Computing" [3]. By understanding and employing these cybersecurity solutions effectively, businesses can securely experience the benefits of cloud computing, which include lower costs, enhanced productivity, and faster turnaround times [1] [3].

II. Types of Cybersecurity Threats within Cloud Computing

The adoption of cloud computing has revolutionized how businesses handle their data, providing accessibility and scalability to organizations globally.

Though cloud computing offers lower costs, enhanced productivity, and faster turnaround time for businesses, cybersecurity is crucial. Cloud infrastructure can experience attacks, causing data exposure despite the presence of highly encrypted and secure software. [2] The complexity of cloud infrastructure can benefit from security solutions. Hence, learning about cloud computing attacks can help organizations secure their software and combat attacks from hackers. [3] Malware, ransomware, phishing, and denial of service attacks are some of the cloud security threats that many companies have experienced in the last year. [2] The age of cloud computing calls for new cybersecurity solutions [4], especially since cloud computing poses significant security challenges. The Cloud Security Alliance (CSA) identified about 25 security threats in cloud computing, which were then narrowed down to the 11 most common ones. The latest CSA report revealed that six of the 11 top threats were new to the list [3]. The utilization of cloud computing service providers must include security policies, protection software installation, and hiring professionals to ensure cloud infrastructure remains secure, the customer's responsibility [1] [4]. Cloud service providers and organizations highlighting the most common cloud security threats can tackle the "Overview of Cybersecurity Threats faced in Cloud Computing" section [3]. Finally, the proactive security approach is recommended to combat cybersecurity threats in cloud computing as most of the threats are the customer's responsibility [3] [2]. Therefore, understanding cloud computing security and its threats is paramount for businesses to protect their valuable data and continue to thrive in a cloud environment.

In summary, cybersecurity is crucial in the context of Cloud Computing. Different stakeholders, including cloud service providers and customers, have the responsibility of securing cloud infrastructure. Cloud computing security challenges exist, necessitating companies to implement practices that protect their data. The adoption of preventive security measures is highly recommended to prevent cybersecurity threats. Learning about cloud computing attacks can help organizations address the most common cloud security threats. Companies must consider cloud computing security risks before embracing the cloud. Therefore, understanding cloud computing security and its threats is paramount for businesses to protect their valuable data and continue to thrive in a cloud environment.

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