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Subject : Virtualization and C.C.

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A.

According to research it was shown that almost one third of all organization have been utilizing the public and private cloud infrastructure for more than three years now, and more than half of all organizations have their production workload all on the cloud. The concept of cloud computing is far above than just a physical and virtual server, which transforms into a different cybersecurity model, but gradually, all these differences lead towards a wide range of security issue.

All the security concerns associated with cloud computing fall into any of two broad categories: challenges faced by cloud providers and challenges faced by thier customers.

→ Some security challenges are:

- Data leaks: A data leak also referred to as data breach is release of confidential and private data to an untrusted environment. Some of the challenges in cloud are also prevalent

in traditional corporate networks, but since the data stored on cloud servers is huge, providers usually get to be victims of these attacks. Here the damage severity is directly proportional to the sensitivity of data that is exposed.

- **Poor diligence:** This arises when an organization is not clear about any of its policies, resources, and methodologies for cloud. Organizations leverage the cloud without a complete understanding of its environment and the risk associated with it, may encounter numerous technical, financial and legal risks.

In some cases organizations are not aware of provider's liability in case of any data loss activity. This is because, they fail to ~~scrutinize~~ scrutinize contract efficiently.

- B. Netflix uses Amazon Web Services (AWS) for nearly all its computing and storage needs, including data bases, analytics, recommendation engines, video transcoding, and more-hundreds of functions that in total use more than 100,000 server instances on AWS.

This result in extremely complex and dynamic networking environment where applications are constantly communicating inside AWS and across the internet. Monitoring and optimizing its network is critical for Netflix to continue improving customer experience, increase efficiency, reducing cost. In particular, Netflix needed solution for ingesting, augmenting, and analyzing multiple terabytes of data its network generates daily in the form of virtual private cloud (VPC) flow ~~logs~~ logs. The company would also be able to increase uptime by quickly detecting and mitigating application down time.

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Netflix set out to establish a new data source that could give it more insights into communication among applications and regions by combining VPC ~~flow~~ flow logs with application metadata.