MARKET ESTIMATION OF CLOUD MIGRATION SERVICES AND ITS SECURITY MEASURES

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Abstract

Cloud computing is a new emerging computing the model which comes from grid computing, distributed computing, parallel computing, virtualization technology, utility computing, and another computer technologies and it has more advantage characters, for example, enormous scope calculation and information stockpiling, virtualization, high availability, high dependability and low-value administration are given to the customer as a help. It projects a unique way to architect and remotely manages to compute resources having limited management efforts and service provider interaction. The purpose of the study looks upon different sectors in the market that are moving into cloud migration services because of its highly scalable and agile advantages and also region-wise analysis of cloud technology adoption. The impact of pandemic COVID-19 is discussed over Cloud services both positive and negative. Also, the study focuses on the security issues related to cloud migration services and discusses the preventive measures related to data theft, and encryption..

Key words: Cloud Migration, Agility, cloud security, Virtualization

Introduction

Cloud computing is up and coming paradigm in which application, processing resources, information, and operational stage are given to customers as administration.

When we talk about cloud migration it is the process of partially or fully deploying an organization's physical servers, digital assets, IT resources, and application to the cloud. It is also known as Business Process Outsourcing (BPO), which completely migrates total organization infrastructure, where compute, database storage, software, and platform services are transferred to the cloud for access [1].

As Musale & Khot states that Cloud migration sometimes looks into, which is known as the cloud to cloud migration "moving data or other business elements between cloud environment [2]. Tools and resources used to fill the void between the providing vendor's and the customer's this middleware technology are defined as a cloud integration tool, which is used for a successful migration.

Benefits of Cloud Migration

• Cloud Migration scalability gives Dynamic Scalability for business upliftment and growth at its micro and macro level.

• Cloud migration automates all the security and software updates.

• Cloud transparency and usage-based pricing model that saves valuable resources.

• Real-time Monitoring constantly improves performance and provisioning[2].

• Fully automated provisioning release and preparation of I.T. resources facilitate high availability [2].

• Other benefits of cloud migration are multi-tenancy as it allows individuals of any department or with different companies can share the resources, application, and compute services.

Points to Consider while cloud Migration

▪ **Reason for Migrating system to cloud**

Despite the way that there is an industrial design toward cloud migration, it isn't generally the most intelligent response for the total of your applications. If the driving variable is cost investment funds, be certain that your cost the examination is exact. While cloud arrangements may well give long haul cost reserve funds, they may not generally have the quick effect that numerous associations are searching for.

▪ **Types of cloud and services needed Private, Public and Hybrid**

The applications running on a server shared with other companies/entities are in the public cloud as it is more flexible, affordable, and scalable. The dedicated servers are hosted for individual use or locally used in the private cloud. Private cloud tends to be highly secure than public cloud. Hybrid cloud is one which is a mix of both Public and Private cloud.

▪ **Different types of cloud service used for migration**

1.   Infrastructure.as a service (IaaS) [3]
2.   Platform as a service (PaaS) [3]
3.   Software as a service (SaaS) [3]

How resources should be migrated

Cloud Migration has to be a gradual process. Therefore, the primary and basic applications should be migrated first this will give us initial good testing, even training for the more difficult applications to upcoming to migrate in the future. On the off chance that point is supplanting a current framework, for the old application through and through may dispense with the most assignment. On the off chance that we updating existing applications, the redesign procedure can be taken ahead. All together focusing on the following elements might be progressively useful.

•   Programming approving is an essential issue concerning cloud relocation. To evade large problems when the application goes live, an exhaustive audit of every product permit for the better cost ramifications is basics [2].

•   The design of certain applications is essentially not helpful for a cloud domain, especially when it comes to execution. Survey this issue for each application intended to relocate. Versatile applications, web applications, and even some old centralized server-based applications may work best. Some customer server applications, notwithstanding, might be all the more a test.

•   An independent application that won't have numerous interfaces for different projects, for the most part, shows signs of improvement for relocation.

•   If we have as of now virtualized an application on a neighbourhood server, it will be a lot simpler to move to a cloud-based server. Some specialist organizations have apparatuses explicitly evolved to encourage this

Objective

The objective of this research paper is to identify the market of cloud migration services by region and sector-wise. This paper also aims to understand the impact of COVID-19 on Cloud services. Lastly, the paper summarizes various security issues and preventative measures taken for cloud computation.

Literature Review

Nowadays every industrial sector is looking forward to migrating their on-premise infrastructure to the cloud as it provides more agility and availability. It refers to the method of migration of total business to the cloud. The main aim of this literature review is to find the market estimation of cloud migrating services over various industrial sectors also regional analysis. Also, to understand the issues and its preventive measures of cloud migration services.

There have been several studies that have been conducted with respect to cloud migration services and security measures. A survey report about How the cloud is Being Used in the Financial Sector by Cloud Security Alliance [4]. In this survey, it was found that infrastructure agility, reduced operational expenditure, and shortened time of response are some of the top reasons to move to the cloud.

Sid Nag, Research Vice President at Gartner describes cloud migration service as mainstream and also puts forward that next-generation solutions are cloud enhanced solutions, meaning building a business on the strengths of a cloud platform to deliver high performance digital transformed business capabilities [5]. Rai, Sahoo, & Mehfuz states that Cloud migration is still in its nascent stage, but is maturing at a fast pace [6]. Jim Jordan of Rivermeadow cloud migration describes cloud migration is not entirely extensive to certain industries, industries like manufacturing, BFSI, retail, Media and Healthcare are leveraging the cloud migration platform right now [7].

Cloud security is a significant worry for the choice to relocate, as both the staff and the association can be decidedly or contrarily influenced. The paper by Tawfique & Vejseli describes CIA triplet helped with giving a wide inclusion on the best way to distinguish and perceivesecurity dangers and difficulties [8].

Methodology

Through this study, we will be looking at cloud computing advantages because of various market sectors and different geographical regions are adopting the cloud services which will be through different journals, research papers, market research documents which are published in the field of Cloud Migration services and its market. It is based on secondary data which looks into the parameters and impacting factors for cloud migration. This research further proposes the impact of COVID-19 over cloud computing and gives detailed information regarding security measures.

The research questions addressed in this study includes:

· Which regions and sectors are adopting cloud migration services?

· What are different impacting factors for cloud service adoption because of COVID-19?

· What are different security issues and preventive measures are taken for cloud migration of resources?

Cloud Migration Services

Global cloud migration service market is segmented by the deployment of resources (Private, Public, Private, Hybrid Cloud), By Services (Managed and Professional Services), By Market vertical (BFSI, Healthcare, Telecommunication, ITES, Retails, Government sector, Public sector, others and by Region (America (Northern & Latin America), Europe, Asia Pacific, Middle East, and Africa) – with consideration is given to Share, Size, Outlook, and Opportunity Analysis [9].

Market Overview

The global cloud migration services are projected around at a CAGR of over 22% - 24.5% from USD 119.13 billion in 2019 to USD 448.34 billion by 2025 during the projected period. Enhanced business efficiency because of ever-changing information technology services offered by on cloud computing with the service of pay-as-you-use/go paradigm for small and medium scale industries by different market players will further enhance growth in global cloud migration service market. The interest in distributed computing is required to be driven by factors, for example, lower costs, adaptability, security, and nimbleness. As cloud technology combines both research and innovation, also deploying a complete lifecycle of cloud compute virtualization to offer the operational process [10].

Automation, Service and business operations is expected to have the largest market share

The cloud relocation administrations showcase based on administration type includes computerization and combination, application facilitating and checking, disaster back-ups, DevOps, preparing and consultation, backing plus the uptime, and oversaw administrations. The digitalization plus administration type is having the biggest market share since 2017 and, of cloud relocation administrations around the world. Automation and Integration empower undertakings to smooth out their cloud movement exercises proficiently. Automated testing aids in cost savings, manual communication, time and saves capital expenditure. Because of this there is an increase in the efficiency of the Business process and reduces the downtime with scaling back quickly [9].

Monitoring and Security management is expected to rise at the fast pace

Cloud computing administrations can be used across industry verticals for various applications. The service section of the cloud migration administrations advertise is additionally portioned to venture the executives, framework the board, security, and consistency the executives, and others (execution the executives and workforce the board). The security and consistency the board is relied upon to develop at the most noteworthy rate. A couple of the significant explanations behind the enormous scope reception of the security and consistency application is shielding information fromaddressing consistency needs, getting to control, conveying vigorous information encryption, and upgrading incorporation [9].

Regional Analysis

The provincial research and analysis of cloud movement administrations showcase that following are the regions that are into cloud services: Asia Pacific, North America, Europe, and the Australian Continent. North America (United States, Canada, Mexico City) is a commanding the area as it has a tremendous interest in cloud benefits because of the expanding reception of man-made consciousness, which is boosting the market development to an enormous degree. In Europe, the market development for virtualization administrations are developing with immense development because of innovative updates in distributed computing which is driving the market development. Though the Asia Pacific is the developing markets for cloud relocation administrations, in nations, including China, Japan, and India, and it is relied upon to pick up energy with the expanding infiltration of IT benefits and develop with the most noteworthy CAGR in the coming years[9].

As far as appropriation for cloud movement, North America is among the main trendsetters and pioneers and holds the biggest offer in the market. The area additionally has a solid dependable balance of cloud movement sellers, which adds to its development. A few organizations incorporate IBM Corporation, Microsoft Corporation, Amazon Web Services Inc., Cisco Systems Inc., Cognizant Technology Solutions Corporation, and Google Inc., among others [9].

It is indicated that 95% of the organizations in North America have moved their basic applications and IT framework to the cover over the previous year [11]. Furthermore, over 80% of firms in the district have referenced looking for cloud relocation for a portion of their applications one year from now. The progressed mechanicalscene in the North America district has prompted the across the board joining of AI on various operational levels, prompting a developing requirement for cloud movement. Also, BYOD substantially affects the endeavors, as they understand the benefits of cost-sparing, efficiency, and adaptability.

OSRAM, a lighting maker has purportedly embraced cloud movement administrations for its new and heritage application to increase a coordinated IT framework that could stay aware of the opposition. With this reception, the organization has referenced accomplishing seven-digit yearly reserve funds, and a few serious news organizations win. As indicated by thediscoveries in the Global Cloud Index by Cisco, administrators of hyperscale cloud server farms are progressively overwhelming the cloud scene. For example, as indicated by Credit Suisse, the portion of hyper-scale server farms in the United States represents 47%, and Canada represents 4%.

The advantages offered with moving information, applications, among others to the cloud, are pushing numerous associations in the area to embrace cloud movement administrations, accordingly affecting the

market's development decidedly. For example, Amazon web administrations cloud relocation diminished equipment spend by 20%, for one of the top North American-based travel specialist organizations, focusing on the worldwide market. Creeks Brothers, men's clothier in the United States, saw a half increment in profitability by moving to a cloud-based. Clark Construction, a development organization in the United States, needed to relocate its applications and information to the cloud. Utilizing Cloud Endure Migration, the organization moved everything to AWS [9].

Market Scenario

The cloud relocation administrations are fundamentally development of foundation, information, business procedures, and compute service to the cloud. The expanding interest for cloud administrations among IT and media transmission enterprises are boosting the market development for cloud relocation administrations to an enormous degree. The components driving the development of cloud movement administrations incorporate the expanding infiltration of computerized reasoning and AI. Organizations, for example, International Business Machines Corporation (U.S.), Microsoft Corporation (U.S.), Tech Mahindra (India), Dell (U.S.), HCL Technologies (India), are the main suppliers of cloud relocation administrations arrangement in the worldwide market. Currently, we can see there is growth in Information Technology as administration which has shown emphasis over public cloud deployment, which has shown gradual market growth.

Segmentation of Cloud Migration Services Market

The worldwide cloud relocation administrations showcase is sectioned into administrations, arrangement, association size, applications, enterprises, and locale. The administration section is further sub-fragmented as oversaw administrations and expert assistance. Likewise, the expert administrations are sub-divided into robotization and reconciliation, support and upkeep, catastrophe recuperation, preparing and counseling, and others. The organization is sub-portioned into public-private and Hybrid. cloud. As indicated by the association size, the market is divided into small, medium, and large-scale industries. The application service portion is divided into framework the executives, surveillance and consistence the board, workforce the board, venture the executives, and others. The enterprise fragment is sub-portioned into government, IT and media transmission, assembling, and others. The market is crossed across districts including North America, Europe, Asia Pacific, and the Australian Continent. The worldwide cloud relocation administrations advertise is assessed to reach USD ~ 8 billion before the finish of the figure time of 2023, at a CAGR of ~22%.

Market Mobility

Propelling Factor: Increased Adroitness and Automation

In the time of perplexing and assorted processing condition, the end-clients are looking for more brilliant approaches to guarantee the ideal usage of resources [9]. This search carries with it, extra degrees of the board complexities, consequently expanding the requirement for adroitness and robotization for deftness and mechanization. The formation of virtual network relocation administrations empowers associations to accomplish suitable degrees of mechanization, alongside agility. Enterprises are looking to get more adaptable plus coordinated than their traditional virtualization approach, which can be handily accomplished by relocating the current outstanding task at hand to the cloud. Business dexterity on the cloud will be the major driving force for cloud migration.

Moreover, cloud relocation administrations empower end-clients to increase operational and monetary advantages of distributed computing through numerous mechanization tools, including computerized reinforcement and recuperation, auto-scaling, and auto-provisioning. The robotization instruments give various advantages, for example, dealing with different cloud arrangements, empowering programmed recuperation if there should be an occurrence of an emergency, and improving the calamity recuperation/business coherence. Cloud relocation administrations upgrade the business readiness across various cloud situations, in this way recuperating the administration levels in endeavours.

Restraints:

Fear of vendor lock-in

As there is various migration service provided by many Subject Matter Experts and Large firms are adopting these services to migrate an on-premises network to cloud and virtualize their network. As some enterprises limit themselves to a single vendor as taken into consideration cost-saving and efficiencies. In this serious existence where each organization needs to increase a serious edge over their competitor, organizations would prefer not to depend on a solitary merchant. This would make movement expensive as well as require a multi-cloud condition involving different cloud vendors and in-house frameworks.

Opportunity: Advantage for Managed Service provider (MSP)

The cloud migration advertise makes open doors for the MSPs. The MSPs can deal with various assignments, for example, overseeing virtual machines, cloud administrations, stockpiling administrations, relocation administrations, and services that are running on open cloud conditions, for example, AWS, Microsoft Azure, IBM Bluemix, and Google Cloud. Making Virtual Network can be a scary procedure for the SMEs that come up short on the specialized ability and have spending limitations. This is the point at which the MSPs can help and conquer the difficulties that the organizations - face, including a restricted workforce and data transmission, and the execution of complicated projects. Moreover, the MSPs can likewise propose in embracing the correct program as indicated by the association's needs, bringing about expanded dexterity, decreased capital expenses, and expanded productivity.

Challenges: Issues in redesigning the network for cloud

The upgrading of systems for movement from on-premises to the cloud requires high beginning endeavours, which is irksome especially for SMEs that have constrained financial plans and assets. Plus, the vast majority of the ventures have found the climb to cloud relocation capricious and over the top. Ventures need to take care of several issues, alongside the system engineering, to oblige their cloud framework arrangement. It is hard to accomplish permeability, scale the exhibition, and deal with the outstanding tasks at hand over different cloud arrangement models. Multifaceted nature is the greatest test in cloud relocation, because of its sending structure and techniques required for the formation and dealing with the cloud movement.

Key Market Players

AWS (US), IBM (US), Microsoft (US), Google (US), Cisco (US), NTTData (Japan), and VMware (US)

The organization offers AWS Cloud to ventures for the relocation of utilizations, information, outstanding burden, and other IT assets. Engineers and draftsmen influence the AWS Cloud to configuration, create, examine, and send new applications by utilizing the Application Programming Interface (APIs) of the cloud. Relocation of uses/answers for the cloud gives different advantages, for example, moment versatility and flexibility, detached procedures, decreased operational exertion, and on-request provisioning and robotization. Endeavours need an adaptable and secure answer for relocating to the cloud with no potential information misfortune and with zero vacation. AWS gives cloud movement items and administrations that empower ongoing information observing and speedy information move with huge cost investment funds [9].

Top Industries anchoring Cloud computing and cloud migration services

By Industry Vertical

- Banking, Financial Services and Insurance

- Manufacturing

- Healthcare

- Retail & FMCG

- Government & Public Sector

- Media & Entertainment

- Others

BFSI

In the banking sector, cloud computing allows in inventing new ways of lending, new ways of saving, banking of faraway populations, reducing banking prices, banking of par populations, and new methods of creating payments. In the banking enterprise, developments were driving cloud computing. The first is adopting the cloud with the aid of traditional banking establishments for the back-workplace and decided on patrol operations. The second is Fintech who often uses cloud-based totally offerings to complete in key banking products.

The maximum crucial situation of the monetary enterprise turned into protection, however with the usage of cloud computing the financial enterprise has gained victory over it. It offers you with Tier three, class 1 records, encrypted information, and limited access credentials for the confidential statistics. This helps the monetary establishments to complete their ordinary venture with no trouble like client interaction and billing. Cloud computing has reinvented the way the economic global features.

Manufacturing

Using cloud computing in an enterprise isn't always a choice however an opportunity. Using cloud computing you could synchronize information from multiple sources right into a single dashboard, which relieves executives from the weight of manually shifting statistics from one system to every other. It additionally facilitates in synchronization of information by using defining a single factor as a supply of information and permitting access to it via the internet. Cloud is a flexible and handy preference as it comes with platform, service, and infrastructure.

Healthcare & Life Sciences

Cloud healthcare solutions make certain that it is an easy and reliable transition which has been a worry of the healthcare enterprise inside the past. It allows medical doctors to easily stay related to their patients which improves collaboration with each other. It provides answers compliant with numerous healthcare regulations, which include HIPAA. The easy tasks like making referrals and completing affected person records can be executed very quickly through the use of cloud computing. These tasks were a hassle earlier. This facilitates in focusing their entire interest toward the affected person.

Consumer Goods & Retail

The stores buy products to sell to the customers who buy them for their personal use and no longer for making an income out of it. The outlets purchase the goods in bulk from the wholesalers and then add their margin and further sell it to consumers. The cloud computing offers benefits like scalability, decreased price, lesser time and versatility, get admission to big amount of saved statistics from everywhere and each time, the segmented marketplace, advanced and maintained courting with customers, tracking the present-day traits of customers conduct and buying styles toward various brands, reducing price and focused on the right purchaser and so forth.

It saves the stores from preserving costly hardware structures due to the fact the hardware device and software program packages are located on servers in massive statistics centres. This feature helps the shops to hold on their business regardless of low finances and with modern technologies. It enables in analysing a large quantity of sales statistics and in actual-time inventory control.

Media & Entertainment

Scalable resources are supplied by cloud computing. This characteristic of cloud computing offers you the simplest pay for the computing sources you use. With the help of this feature, you could without problems supervise projection without making any investments. For example, Netflix leverages scalable utilization of cloud computing to its gain. Netflix faces large surges in server load at top instances due to its on-demand streaming services. The migration to the cloud helped the organization to expand its purchaser base without investing in costly setups. This is how cloud computing is being leveraged with the aid of the entertainment industry that's the very large motive for its success [12].

COVID-19 IMPACT ANALYSIS

In the current COVID-19 pandemic era where the business is trying to recuperate from the capital and operational challenges, many CXO's are looking for digital transformation using various digital tools and techniques among which cloud migration has witnessed exponential growth. Large enterprises and SME's are inclined towards cloud migration services, which has accelerated migration process, scaling of the inhouse services, the transformation of legacy applications, enabled and orchestrated multi-cloud environment, while anchoring various cloud-native capabilities. Furthermore, many cloud services companies have introduced various attractive cloud migration strategies that particularly support SME's to undertake these services relaxed with much less monetary burden which is growing opportunities for the market [13].

Impacting Factors

An increase in want for enterprise agility and upward push in adoption of automation answers are foremost elements anticipated to pressure the boom of the worldwide cloud migration offerings marketplace during the forecast duration. The surge in need for quicker and easier deployment of applications with a pay-as-you-pass version coupled with a rise in adoption for cloud migration in business continuity is anticipated to enhance the marketplace forecast boom. Moreover, alternatives for decrease CAPEX and OPEX amongst numerous businesses throughout the globe is anticipated to propel the marketplace growth. However, issues associated with agency software's cloud compatibility and cloud interoperability and vendor lock-in conditions are a number of the elements that abate the increase of the marketplace to a certain volume. On the contrary, the upward push in international cloud fees and excessive adoption fee of cloud migration offerings within the healthcare region are elements of the global cloud migration offerings marketplace opportunity [13].

Study of Security risks for Cloud migration services

The vulnerabilities and hazard situations can be broken down for protection at the cutting edge and are critical in ideally choosing and installing appropriate security tests. High-risk elements or challenges to the virtualized environment come along with vulnerable application programming interfaces, aggressive outsiders, shared software flaws, data loss/leakage, and identity control [14].

Diffident Interfaces and APIs

•   In the cloud system, APIs have enormous forces and advantages including coordination, preparation, and observation. Cloud management protection and accessibility are specifically linked and based on the stability of such APIs. Specific divisions and controls should be conscious and organized, such as authentication, access to management, security, and malevolent attempts to infiltrate the information or network scope or to compromise. Without these controls the threat raises the multifaceted complexity of the newly constructed API, it will open up security problems with authentication, confidentiality, transparency, and accountability [14].

Ransomware within the cloud:

- Ransomware is deployed 3x more than another form of malware in cloud environments, accompanied by way of crypto miners and botnet malware.

Cybercriminals leading the rate:

- Financially influenced cyber criminals are the most generally determined chance institution class focused on cloud environments, although nation also are a continual danger.

Make use of cloud apps:

- Common entry point for hackers is through cloud application, including tricks such as brute-forcing, exploiting vulnerabilities, and misconfiguration. Overseeing weaknesses in the cloud might be trying, because of the way that weaknesses in cloud items remain out of the scope of conventional CVEs until 2020.

Data theft:

- Outside of malware deployment, facts data theft changed into the most commonplace threat interest discovered in breached cloud environments over the past year, ranging part identifying records to purchase-related emails.

Exponential returns:

- Hackers use cloud resources to amplify the threshold of the attack DDoS and crypto mining. Additionally, threat groups use the cloud infrastructure to host their malicious infrastructure and operational activity, adding scale and adding a layer of obfuscation as to remain undetected.

Security Measures for cloud migrating services

Bandwidth Planning

- Creation of rendition and comprehend data streams and transmission capacity prerequisites to ensure that security arrangements can meet execution necessities, chiefly for touchy administrations that will need to go over VPN sap [15].

Provision for High Availability and Disaster Recovery

- The largest fear for maximum organizations searching at a cloud solution, after addressing protection worries, is the availability of cloud-primarily based assets [15]. We additionally want to understand whether dynamic scaling is needed and whether or not your security answer can meet new performance necessities. Lastly, for cloud disaster recovery there should be risk assessment and business impact analysis then look for preventive measures, prepare an action plan with the response to it and look for the recovery plan. Then test and update for the cloud disaster plan.

Deployment of Right security

- Cloud security requires considerably more than firewall at the hubs of the cloud foundation. Wide scope of security arrangements is to be applied relying upon the application and instances use. Next- Generation Firewall (NGFW) solution is the most used and common security tool to be applied [15], with these alternative solutions are often also required, including Web Application Firewall (WAF),Cloud Access Security Broker (CASB) and Intrusion Protection or Detection Service (IPS/IDS) [15].

Institute a Framework related to Lifecycle Management

- Make sure there should be equilibrium between protection arrangements (policies) and solutions requirements, particularly when there is spanning in more than one environment, which is critical. Security

instruments need to be picked not best for the possibility to work locally in a particular cloud stage, yet additionally for their ability to interoperate flawlessly employing the whole security strategy ways of the life cycle with sister answers conveyed in different situations. This incorporates predictable security exchange strategy, dynamic provisioning, and scaling the single purpose of the executives, for example, mix with a basic ITSM arrangement and basic log arrangement—and relationship [15].

Encryption of data

- Encryption is the best way which can help and guarantee the security of the association's information. Guarantee that encryption is offered and reinforced by the specialist organization all through and after the movement procedure [14].

Conclusion

Cloud computing is a rising technology of nowadays' s technology. Cloud Migration is a crucial and vital concept of this trend and era behind its miles maturing. This paper gives the intrinsic know-how about the basics of the migration idea, focusing upon the first of all wished elements emigrate which consist of the type of cloud and alertness migration paradigms assisting novices to try and parent what are the crucial steps and elements for migration to the cloud.So this paper has projected cloud migration services grow around at a CAGR of over 22% - 24.5% by 2025 from USD 119.13 billion in 2019 to USD 448.34 billion in 2025. Considering the geographically, North America will be more into cloud migration services. Also, industry-wise areas like BFSI, Healthcare & Life science, Manufacturing, Retails & Consumer goods and Media entertainment are the industries that are into cloud migrating services. Concerning security concerns considering to data theft, Ransomware usage within the cloud and use of cloud infrastructure as to amplify the attack of DDoS and crypto mining, as to overcome these attacks we have seen measures like encryption, planning of bandwidth in which we make sure that protection solutions can meet performance requirements and also the provisioning of high availability and data recovery.

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