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CLOUD COMPUTING 2.0: UNLEASHING INNOVATION AND TRANSFORMATION

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CONTENT

COVER STORY 6

Cloud Computing 2.0: Unleashing Innovation and Transformation

IN CONVERSATION

Enterprise of the Future will be Edge-Centric, Cloud-Enabled, and Data-Driven: HPE

14

BHAWNA AGARWAL
Country Head - Strategy and Growth, HPE India

Cloud Computing 2.0 is Bringing a Paradigm Shift in Digital Transformation: Salesforce

18

DEEPAK PARGAONKAR
VP, Solution Engineering, Salesforce

Cloud Computing 2.0 is Shaping the Tech Landscape for Accelerated Digital Transformation: Dell Technologies

20

SRINIVASCHARY T
Lead – Solution Architect, Dell Technologies India

Cloud Computing 2.0 is Shaping Digital Transformation and Industry-Specific Innovation: Yotta

22

DR. SAYED PEERZADE
EVP & Chief Cloud Officer of Yotta

Cloud Computing 2.0 will drive the Next Phase of Digital Transformation: IDC

25

RAJIV RANJAN
Associate Research Director, IDC

CHANNEL NEWS 27-29

- Indian IT & Business Services Market Records 7.4% YoY Growth in 2022
- Marketers Embrace Generative AI as 60% Expect Transformation, but Accuracy Worries Persist
- Salesforce Introduces Marketing GPT and Commerce GPT to Revolutionize Personalized Experiences with Generative AI

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Cloud Computing 2.0: Unleashing Innovation and Transformation

In today's rapidly evolving digital landscape, Cloud Computing 2.0 has emerged as a transformative force, revolutionizing the way businesses operate and accelerating their digital transformation journeys. This cover story delves into the intricacies of Cloud Computing 2.0, exploring its impact on technology landscapes across industries and shedding light on the next phase of innovation and transformation

Amit Singh

Operating with caution is the way to do business in 2023. Leaders are more mindful of their expenses, given the economic uncertainties. Organizations wonder if it is possible to increase ROI and maintain low IT infrastructure and storage costs while enabling agility and automation.

The cloud presents a transformative solution for organizations. According to a report from McKinsey, leveraging the cloud allows companies to shift their IT spending from a capital expenditure (capex) model to an operational expenditure (opex) model, resulting in an overall cost reduction of up to 60 percent. As the Indian government pushes forward with digital initiatives, the projected digital transformation (DX) spending in India is expected to reach $85 million by 2026, with cloud computing, particularly Cloud 2.0, positioned at the core of this transformation.

Cloud 1.0 to 2.0

Cloud computing has come a long way since its inception, evolving from a novel concept to a critical component of modern business operations. Many recent cloud investments were made in a rush during the onset of the Covid pandemic to cater to remote working or a short-sighted goal of cost savings.

However, the current global economic landscape necessitates a reevaluation of cloud strategies, placing emphasis on the true value derived from these investments. Businesses are now seeking to fine-tune their cloud-value evaluation models and explore avenues to support customers and diversify revenue sources. This paradigm shift highlights the cloud as a fundamental pillar of modern business strategy, playing a vital role in driving growth, transformation, and continuous innovation.

Cloud 2.0 represents the next generation of cloud computing, offering a more advanced, sophisticated, and secure platform that fuels innovation and supports organizations in their digital transformation (DX) strategies.

The introduction of Cloud Computing 2.0 marks an era of unparalleled innovation and transformation. The true transformative power of the cloud is being realized today as it enters a higher stage of evolution, propelled by artificial intelligence (AI), machine learning (ML), edge computing, quantum computing, and other next-

“The role of the cloud has evolved from future-proofing technology to future-proofing businesses. Cloud Computing 2.0 delivers a unified, cloud experience for customers’ data and workloads, enabling them to consume IT as-a-service.”

BHAWNA AGARWAL,
Country Head - Strategy and Growth, HPE India

> “The cloud has become the standard platform for all business operations. AI, low-code, Function as a Service, and serverless platforms have revolutionized the playing field, enabling non-tech-savvy individuals to achieve business objectives like never before.”

SRINIVASA RAGHAVAN,
Product Manager, ManageEngine

generation advancements. This on-demand innovation capability presents exponential growth potential.

Bhawna Agarwal, Country Head - Strategy and Growth, HPE India, provides her perspective, stating, “The role of the cloud has evolved from future-proofing technology to future-proofing businesses. Cloud Computing 2.0 delivers a unified, cloud experience for customers’ data and workloads, enabling them to consume IT as-a-service.”

Cloud Computing 2.0 builds upon the foundation established by its predecessor, addressing previous limitations and challenges. It harnesses advanced technologies like edge computing, serverless computing, and AI integration to drive innovation and enable businesses to achieve their digital objectives.

“With Cloud 2.0, organizations can now perform data analysis, apply artificial intelligence, and develop advanced applications in the cloud. This evolution has elevated cloud computing’s significance, making it essential for critical applications, data analysis, decision-making, and AI integration,” explains Deepak Pargaonkar, Vice President of Solution Engineering, Salesforce.

Srinivasa Raghavan, Product Manager, ManageEngine, adds, “The cloud has become the standard platform for all business operations. AI, low-code, Function as a Service, and serverless platforms have revolutionized the playing field, enabling non-tech-savvy individuals to achieve business objectives like never before.”

Time to market with serverless computing

The longer companies take to update their technology, the more difficult and expensive the final change will be. As a result, outdated digital technology solutions make it difficult to adapt business capabilities to market demands.

Businesses can expedite their code to production rates with serverless cloud computing (cloud 2.0). For instance, if an electric vehicle (EV) manufacturer wants to incorporate additional capabilities into its vehicular operating system, deploying it through the cloud simplifies the process.

Cloud 2.0 takes this efficiency to the next level. Its serverless architecture allows organizations to focus entirely on developing value-added functions and

features. According to McKinsey, this capability enables organizations to test innovations and respond to client demands 20-40% faster.

In traditional cloud environments, users log into virtual servers, whereas in serverless computing, the entire functional application programming interface (API) runs without the need for server management. This serverless setup empowers businesses to prioritize the development of value-added functions and features.

Industries like media and entertainment, with data and graphic-intensive workloads, often require high-performance computing power, which typically involves significant investments in specialized hardware infrastructure. "The next generation of the cloud leverages its computing prowess to deliver high performance for these workloads on a subscription model," adds Dr. Sayed Peerzade, EVP & Chief Cloud Officer, Yotta. He further explains that this approach relieves IT teams of infrastructure management concerns and allows them to focus on programming, while organizations can benefit from cost savings, scalability enhancements, and increased agility.

Serverless architecture offers two key advantages. Firstly, it follows a pay-as-you-go strategy throughout the entire technology stack, allowing for cost reduction at the most granular level possible. The pay-as-you-go approach ensures that functionalities are placed into production via the serverless ecosystem operator only when they are needed.

Secondly, serverless architecture provides ecosystem access to both the underlying infrastructure and the full functionality, significantly reducing the cost of transforming a company's IT environment.

By embracing Cloud 2.0 and leveraging the power of serverless computing, businesses can unlock new levels of efficiency, agility, and cost savings. The ability to rapidly develop and deploy value-added functions empowers organizations to stay ahead in an ever-evolving digital landscape.

Improved app performance with edge computing

One of the crucial aspects of Cloud Computing 2.0 is its emphasis on the Edge, which entails processing data closer

"The increasing adoption of emerging technologies is driving the need to seamlessly deliver services in real-time, fueling the growth of next-generation cloud computing. Various sectors such as manufacturing, OTT, gaming, healthcare, and retail are witnessing a growing uptake of edge computing."

DR. SAYED PEERZADE,
EVP & Chief Cloud Officer, Yotta

> “Cloud 2.0 offers AI integration to meet the demands of process automation, improved customer experiences, enhanced operational efficiency, and innovative product design.”

RAJIV RANJAN,
Associate Research Director, IDC

to the source. This approach helps decrease latency and enhance application performance, especially for real-time data processing requirements.

“Furthermore, the increasing adoption of emerging technologies is driving the need to seamlessly deliver services in real-time, fueling the growth of next-generation cloud computing. Various sectors such as manufacturing, OTT, gaming, healthcare, and retail are witnessing a growing uptake of edge computing,” explains Dr. Sayed.

By bringing computation and storage closer to data sources, businesses can improve their response times and save bandwidth. Simultaneously, advancements in the edge cloud are expanding the application possibilities for businesses, encompassing in-store and on-site operations, as well as sustainability solutions.

In these scenarios, data processing occurs at the location where the action is happening, such as a production line or an offshore wind farm, rather than at a central command point. In a cloud environment, IoT networks combine with digital twins (virtual avatars of physical environments that act based on real-time data) and artificial intelligence, driving a new era of agile innovation.

Illustrating with an example, Srinivaschary T, Lead - Solution Architect at Dell Technologies India, says, “Recommendation engines for streaming services, or for enhancing the experience of cloud gaming and other visual workloads, are experiencing significant growth. These recommendation engines and visual analytics, crucial for delivering an improved customer experience, are now hosted on micro data centers located at the edge of the cloud.”

Cloud 2.0-enabled DX strategies minimize the risk of overwhelming cloud networks, resulting in longer response times. Edge computing empowers cloud-native applications, enhancing connectivity, scalability, security, personalization, and cost-effectiveness. In the case of EV manufacturers, coupling edge computing with the cloud also unlocks predictive maintenance capabilities. These capabilities can be implemented with the support of deep-tech vendors to reduce costs while ensuring quality.

AI integration in Cloud 2.0

Artificial intelligence

(AI) has emerged as one of the most compelling topics in today's tech landscape. With AI applications rapidly expanding, the driving force behind its growth lies in public cloud services. According to Rajiv Ranjan, Associate Research Director, IDC, Cloud 2.0 offers AI integration to meet the demands of process automation, improved customer experiences, enhanced operational efficiency, and innovative product design.

The integration of AI facilitates the development of predictive analytics applications capable of analyzing vast volumes of data, providing valuable insights into future trends. Dr. Sayed from Yotta highlights the application of AI in various industries like finance, healthcare, and retail. Furthermore, AI integration enables the deployment of chatbots and virtual assistants proficient in understanding natural language and delivering personalized responses to customers. Industries such as banking, insurance, and e-commerce have particularly embraced AI integration within their virtual customer service programs.

Deepak from Salesforce, further elaborates on AI integration, stating that many organizations utilize Salesforce automation and customer service capabilities deployed on the cloud. These organizations now seek to leverage AI to gain insights from their sales, service, and marketing applications. For instance, salespeople can benefit from AI-driven insights on customer behavior, recommendations for cross-selling, and optimized time management for meetings. Similarly, AI-powered chatbots in customer service enable 24/7 support, personalized interactions, and intelligent routing of customer queries, ultimately enhancing productivity.

Additionally, cloud service providers are heavily investing in AI-powered services and tools, simplifying AI utilization for organizations lacking extensive expertise. Deepak emphasizes that this integration empowers businesses to extract valuable insights from their data, automate processes, and elevate customer experiences.

In the Cloud 2.0 paradigm, hyper scalers are moving beyond computing power to offer clients the same innovative capabilities that have solidified their reputation. For example, AWS Supply Chain provides a cloud solution called Amazon Supply Chain, granting access

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DEEPAK PARGAONKAR,
Vice President of Solution Engineering, Salesforce

> “To fully harness the power of cloud-native applications, organizations need to adopt industry-standard platforms that provide flexibility, support application portability between clouds, and avoid lock-in with proprietary environments.”
>
> **SRINIVASCHARY T,**
> **Lead - Solution Architect at Dell Technologies India**

to a plethora of supply-chain best practices and actionable insights, akin to the renowned business innovation that Amazon has become synonymous with.

With AI integration in Cloud 2.0, new horizons of opportunity are unlocked, enabling organizations to leverage the power of AI, transform their operations, and achieve remarkable outcomes.

Enabling scalable cloud-native architectures

In the era of Cloud Computing 2.0, cloud-native applications and architectures play a pivotal role. These technologies enable organizations to embrace a microservices-based approach, enhancing scalability, resilience, and flexibility. By adopting containerization and utilizing platforms like Kubernetes, businesses can efficiently manage and orchestrate their cloud-native applications.

“With containerization and microservices, organizations can develop applications that are modular, scalable, and easily deployable on the cloud. Cloud-native architectures leverage cloud capabilities, such as auto-scaling, load balancing, and managed services, to ensure high availability, fault tolerance, and efficient resource utilization,” explains Deepak of Salesforce.

He further emphasizes that adopting cloud-native approaches allows organizations to accelerate their development cycles, achieve faster time-to-market, and seamlessly scale their applications to meet evolving business needs. Cloud-native architectures also enable organizations to leverage advanced technologies like AI and machine learning (ML) through pre-built cloud services and APIs. This empowers businesses to deliver innovative, data-driven applications and services without significant investments in infrastructure and development.

Cloud-native applications, built on container-based infrastructure, offer advantages such as accelerated development, failure protection through container isolation, easy scalability to handle business needs, and utilization of open technologies for transparency and interoperability. Srinivaschary from Dell Technologies states, “To fully harness the power of cloud-native applications,

organizations need to adopt industry-standard platforms that provide flexibility, support application portability between clouds, and avoid lock-in with proprietary environments."

The availability of application development resources at a click enables organizations to transition to more agile development methods, utilize microservices architecture, and work on CI/CD pipelines with pace. Bhawna from HPE shares, "We are witnessing a widespread adoption of containers for application development in most digital transformation efforts across the country. Many legacy applications are being containerized to ensure easy deployment in a cloud environment."

Cloud Computing 2.0 also introduces low-code and no-code development platforms, empowering citizen developers to contribute to application development. This democratization of software development allows non-technical professionals to build applications and drive innovation within their organizations.

Future of cloud computing 2.0

The future of Cloud Computing 2.0 holds immense potential for driving innovation and transforming industries. On the horizon, we see the emergence of edge-centric, cloud-enabled, and data-driven enterprises. Organizations will leverage edge computing to process data closer to the source, reducing latency and enabling real-time decision-making.

Bhawna from HPE envisions the enterprise of the future, stating, "The enterprise of the future will be edge-centric, cloud-enabled, and data-driven, with security as a foundational requirement." With advancements in technologies like 5G and IoT, organizations will capitalize on the vast amount of data generated at the edge to fuel their innovation and gain a competitive edge.

Cloud Computing 2.0 will continue to redefine industry landscapes, unlocking new possibilities in sectors such as healthcare, finance, retail, and manufacturing. From personalized healthcare solutions to AI-driven financial analytics applications, Cloud Computing 2.0 will reshape how industries operate and deliver value to their customers.

In the healthcare sector, Cloud Computing 2.0 opens doors to personalized healthcare solutions and advancements in telemedicine. Rajiv from IDC emphasizes the potential of Cloud Computing 2.0 in healthcare, stating, "By leveraging advanced cloud technologies, healthcare providers can securely store and process patient data, enabling personalized treatments and remote monitoring."

The finance industry benefits from Cloud Computing 2.0 through AI-driven financial analytics, fraud detection systems, and enhanced security measures. Deepak from Salesforce highlights the impact of Cloud Computing 2.0 in finance, stating, "Cloud-enabled technologies provide the agility and scalability necessary for financial institutions to process large volumes of transactions, enhance customer experiences, and ensure regulatory compliance."

Cloud Computing 2.0 also empowers the retail industry to deliver personalized customer experiences through data-driven insights and targeted marketing strategies. Dr Sayed from Yotta explains the transformative potential, stating, "By leveraging cloud-based data analytics and AI, retailers can gain valuable insights into customer behavior, optimize supply chain operations, and provide personalized shopping experiences."

Moreover, the manufacturing sector can leverage Cloud Computing 2.0 to drive automation, optimize production processes, and enhance supply chain management. Srinivaschary from Dell emphasizes the role of Cloud Computing 2.0 in manufacturing, stating, "Cloud-based solutions enable manufacturers to leverage real-time data from connected devices, enhancing operational efficiency, predictive maintenance, and overall productivity."

In conclusion, Cloud Computing 2.0 marks a new phase of innovation, transformation, and opportunity. As organizations harness the power of this technology, they will navigate the complex digital landscape with agility, scalability, and resilience, enabling them to stay ahead of the competition and deliver exceptional experiences to their customers. With Cloud Computing 2.0 as their foundation, businesses are poised to embark on a new era of growth and success in the digital age.

Enterprise of the Future will be Edge-Centric, Cloud-Enabled, and Data-Driven: HPE

BHAWNA AGARWAL
Country Head - Strategy and Growth, HPE India

In this exclusive interview with Amit Singh, Bhawna Agarwal, Country Head - Strategy and Growth, HPE India, sheds light on the transformative power of Cloud Computing 2.0 and its impact on the technology landscape and digital transformation efforts across industries

In what specific use cases and industry applications are technologies like serverless computing, edge computing, and AI integration making the most significant impact in Cloud Computing 2.0?

In a data-driven world, Cloud Computing drives digital transformation as it drives insights for business transformation. Hence the choice of compute is critical for the success of digital transformation efforts. As we enter Cloud Computing 2.0, compute should be engineered for your hybrid world with an Intuitive cloud operating experience, with security by design to deliver trust and optimized for various workloads.

The new-age workloads are taking center stage and we are witnessing a significant increase in analytics and AI-based workloads which are CPU and GPU-intensive along with container workloads and computing for data solutions and analytics. We can see a rise in the demand for edge computing, however, we are yet to see a large-scale adoption.

What are the potential benefits and challenges businesses may face when adopting and integrating Cloud Computing 2.0 solutions?

As the amount of data being generated and shared continues to increase and consumers demand more access to online services, it has become more difficult for companies to continue operating their businesses on in-house computing servers.

Moving to the cloud is giving organizations of every scale, the ability to move

faster, be more agile, and innovate their businesses. The shift to cloud computing has completely transformed how we work, communicate, and collaborate and is soon becoming a necessity to stay competitive in today's digital world.

Cloud Computing provides several benefits, including increased agility, flexibility, scalability, and reliability. One of the key challenges facing cloud computing is how to ensure that data is protected from unauthorized access and misuse. Another challenge is mitigating the impact of disruptions to cloud services, such as outages or natural disasters.

How does the Cloud Computing 2.0 paradigm influence the development and deployment of cloud-native applications and architectures, and what advantages does it offer to organizations?

Cloud Computing provides a platform that helps in increased agility for organizations. This means that organizations are reducing time to innovation. The availability of all application development resources at a click enables organizations to move to more agile methods of development, use Micro-services architecture and work on CI/CD pipelines with pace.

We are seeing good adoption of Containers for Application development for most Digital transformation efforts in the country. Many legacy applications are being containerized to ensure that the applications are easily deployable in a cloud environment.

The arrowhead of any digital transformation journey for organizations is applications and the adoption of DevOps to reduce the development and deployment lifecycle of software leading to faster innovation for business results.

Cloud Computing 2.0 can help organizations to adopt DevOps by providing a scalable and reliable platform for running applications.

What security considerations and best practices should businesses keep in mind when implementing Cloud Computing 2.0 solutions?

Security is core to any solution today and at HPE we believe that the threat landscape is widening and deepening. Hence, providing an integrated, comprehensive, Zero-trust based architecture 360-degree approach to security is the best way to handle today's security needs for customers.

As an example, to help mitigate security risk and deploy technology, our compute solutions provide Silicon Root of Trust. It is a firmware technology that integrates security directly into the hardware level of HPE servers, making an immutable fingerprint in the silicon that provides advanced levels of protection against firmware attacks. It detects changes being introduced by cyber attackers and disables the server, so malicious code never penetrates and allows operations to quickly regain their original state.

Additionally, ensuring data protection and cyber resilience and making data available for business continuity is also important.

As some of the best practices, we have observed that organizations should ensure that they should:

- Deploy redundancies to security architecture
- Ensure that the security postures are constantly reviewed and monitored
- Use AI-based solutions
- Deploy Zero Trust Networks
- People's preparedness and education in ensuring Security and recovery

> "Cloud Computing 2.0 represents a transformative shift in the technology landscape, driving digital transformation efforts across industries. As we embrace the power of data, edge computing, and AI integration, Cloud Computing 2.0 opens up a world of possibilities, enabling organizations to unlock value, drive efficiencies, and create new experiences for their customers."

Looking ahead, what future trends or advancements do you anticipate in Cloud Computing 2.0 that could significantly impact industry-specific use cases and business outcomes?

The world has become digital, and we are witnessing rapid changes in the overall usage of technology for solving business challenges. While the core applications have been the mainstay for most organizations, we are now in the next wave of digital transformation, fueled by apps and data where everything from edge to cloud is connected. The enterprises unlock value everywhere, revealing new opportunities, new experiences, efficiencies, services, and more.

We believe the enterprise of the future will be edge-centric, cloud-enabled, and data-driven with security being a foundational requirement.

Edge-centric: HPE's strategy is to accelerate enterprises, helping connect all data from edge-to-cloud, delivering insights and added value across all industries. The intelligent edge is where data is generated and processed often for real-time or near real-time analysis and action, driven by IoT, AI, machine learning apps, and workloads.

Cloud-enabled: HPE has shifted from centralized and closed approaches in large data centers to many small centers of data everywhere which are highly decentralized and distributed. At HPE, we believe the cloud is an experience, not a destination, and apps and data live everywhere across edges, colocations, data centers, and clouds.

Data-driven: In the data-driven world, data is at the heart of everything we do at HPE, which determines how companies innovate, engage with their customers, and gain insights respectively. As per IDC, data will grow to 175 zettabytes worldwide by 2025. Therefore, turning data into actionable insights using modeling, simulation, analytics, IoT devices, and AI/ML means putting intelligence close to data sources to create real-time insights and action.

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Cloud Computing 2.0 is Bringing a Paradigm Shift in Digital Transformation: Salesforce

DEEPAK PARGAONKAR
VP, Solution Engineering, Salesforce

With Cloud Computing 2.0, organizations harness the power of the cloud to manage big data, critical applications, and advanced capabilities like artificial intelligence (AI). In this interview with Amit Singh, Deepak Pargaonkar, Vice President, Solution Engineering, Salesforce, shares valuable insights into the impact of Cloud Computing 2.0 on the technology landscape and digital transformation efforts across industries

How do you see Cloud Computing 2.0 shaping the overall technology landscape and digital transformation efforts across the industry? How has this technology evolved over the last few years?

Cloud computing has undergone a remarkable transformation over the years. Initially, organizations began leveraging the cloud as infrastructure for their business applications and data. For instance, companies adopted the cloud for sales automation and customer service back in 1999. However, today, cloud computing has expanded to encompass much more. It now handles massive amounts of big data, critical applications, and offers platform-as-a-service capabilities.

With Cloud 2.0, organizations can now perform data analysis, apply artificial intelligence, and develop advanced applications on the cloud. This evolution has made cloud computing not only essential for business capabilities but also for critical applications, data analysis, decision-making, and AI integration. The technology has significantly improved computing capabilities, data management, and ease of adoption, leading to its widespread utilization across industries.

Can you provide insights into the specific use cases and industry applications where Cloud Computing 2.0 technologies such as serverless computing, edge computing, and AI integration are making the most significant impact?

Certainly! Let me provide some use cases to illustrate the impact of Cloud Computing 2.0. Many organizations use Salesforce automation and customer service capabilities deployed on the cloud. These organizations now want to leverage AI to gain insights from the data within their sales, service, and marketing applications. For example, salespeople can benefit from AI-driven insights on customer behavior, recommendations for cross-selling, and optimized time management for meetings. Similarly, in customer service, AI-powered chatbots enable 24/7 support, personalized interactions, and intelligent routing of customer queries, enhancing productivity.

These are just a few examples of how organizations are leveraging AI capabilities provided by cloud service providers like Salesforce to deliver valuable insights and exceptional customer experiences.

While adopting and integrating Cloud Computing 2.0 solutions, what challenges might businesses across industries face?

Despite the immense benefits and possibilities of Cloud Computing 2.0, organizations may encounter certain challenges. Security is a significant concern, especially for mission-critical applications and compliance with industry-specific regulations. Organizations must ensure data residency, privacy, and secure data management, particularly in sectors with strict compliance requirements. Additionally, the rapid pace of AI and other emerging technologies demands continuous learning and upskilling of employees to effectively build and leverage these capabilities. Organizations must also navigate the complexities of edge computing and empower their workforce with digital literacy to fully realize the advantages of Cloud Computing 2.0.

At Salesforce, we address these challenges through initiatives like Trailhead, a free learning platform where individuals can acquire skills in various technologies, including AI. Such capabilities aid organizations in achieving security, compliance, and employee skill-building goals.

How does Cloud Computing 2.0 influence the development and deployment of cloud-native applications and architecture, and what advantages does it offer to organizations?

Cloud Computing 2.0 has revolutionized the development and deployment of cloud-native applications and architectures. With the advent of containerization and microservices, organizations can build applications that are modular, scalable, and easily deployable on the cloud. Cloud-native architectures leverage the capabilities of the cloud, such as auto-scaling, load balancing, and managed services, to ensure high availability, fault tolerance, and efficient resource utilization.

By adopting cloud-native approaches, organizations can accelerate their development cycles, achieve faster time-to-market, and scale their applications seamlessly to meet evolving business needs. Cloud-native architectures also enable organizations to leverage advanced technologies like AI and machine learning (ML) through pre-built cloud services and APIs. This empowers businesses to deliver innovative, data-driven applications and services without investing significant resources in infrastructure and development.

What are the security considerations and best practices should businesses in various sectors keep in mind while implementing cloud computing 2.0 solutions?

When we consider different sectors and the advent of cloud computing 2.0, it becomes crucial for organizations to be mindful of specific compliances and regulatory requirements. These requirements may include data residency and the management of data. Organizations must be well-informed about these aspects as they embark on their cloud computing journey. One key consideration is data residency, which is especially relevant in guidelines such as GDPR. Organizations need to determine whether they should retain customer data, even when they are no longer engaged in business with the customer. This is commonly known as the "right to forget." Cloud service providers offer solutions to address such requirements. Additionally, organizations need to address security concerns, including access controls for data and ensuring the security of consumer data in transit. Our solution provides capabilities such as the Privacy Center, which allows organizations to mask data and effectively manage data in transit. These considerations and best practices should be integral to organizations' implementation of cloud computing 2.0 solutions, safeguarding their compliance and security needs.

> "Cloud computing 2.0 brings new possibilities and efficiencies, but it also demands a careful understanding of compliance and security considerations. Organizations must embrace the power of the cloud while navigating the complexities of data residency, regulatory requirements, and data privacy."

As Cloud Computing 2.0 continues to evolve, what future trends and advancements do you foresee in this domain?

Looking ahead, Cloud Computing 2.0 is likely to witness several trends and advancements. One significant trend is the increasing adoption of edge computing, where organizations process and analyze data closer to its source, reducing latency and enabling real-time decision-making. Edge computing is particularly relevant for applications requiring low latency, such as Internet of Things (IoT), autonomous vehicles, and augmented reality (AR)/virtual reality (VR).

Another trend is the continued integration of AI and ML capabilities within cloud platforms. Cloud service providers are investing heavily in AI-powered services and tools, making it easier for organizations to leverage AI without extensive expertise. This integration will enable businesses to extract valuable insights from their data, automate processes, and enhance customer experiences.

Furthermore, as data volumes continue to grow exponentially, we can expect advancements in cloud storage and data management technologies. Cloud providers will focus on delivering scalable, secure, and cost-effective solutions to handle massive datasets, enabling organizations to leverage big data analytics for strategic decision-making.

Overall, Cloud Computing 2.0 will continue to drive innovation, enhance digital transformation efforts, and unlock new possibilities for businesses across industries.

Cloud Computing 2.0 is Shaping the Tech Landscape for Accelerated Digital Transformation: Dell Technologies

SRINIVASCHARY T
Lead – Solution Architect,
Dell Technologies India

In this exclusive interview, Srinivaschary T, Lead – Solution Architect at Dell Technologies India, shares valuable insights on the transformative potential of Cloud Computing 2.0. As organizations across industries embrace digital transformation, Cloud Computing 2.0 offers new capabilities and efficiencies that shape the technology landscape. Srinivaschary highlights the key drivers behind the emergence of Cloud Computing 2.0, industry applications of serverless computing, edge computing, and AI integration, as well as the benefits and challenges businesses may encounter in adopting these solutions

How do you see Cloud Computing 2.0 shaping the overall technology landscape and digital transformation efforts across industries?

Cloud Computing 2.0 is expanding across multiple technologies and domains with varied implementations. One notable implementation is multi-cloud, which has gained significant interest from customers. It plays a crucial role in accelerating digital transformation efforts. Regardless of their size or industry, companies can leverage cloud computing to bring new capabilities to market faster, improve product efficiency, and drive growth and efficiency. It offers scalability, agility, and data adjacency, enabling organizations to scale IT resources efficiently while maintaining control and reducing risk.

What are the key drivers behind the emergence of Cloud Computing 2.0, and how are they addressing the evolving needs of businesses in various sectors?

Flexibility, scalability, and the adoption of micro-services technology remain traditional drivers for evaluating cloud computing across most verticals. However, certain sectors also prioritize security, control, data sovereignty, and application efficiency, leading to the adoption of multi-cloud as a strategy. The challenge lies in maintaining the flexibility of cloud while ensuring security, control, and data sovereignty. Organizations need to adopt cloud in a measured and strategic manner to prevent "cloud sprawl" and realize the expected benefits. They should aim for a consistent set of operations across their IT landscape, account for security postures, and ensure compatibility among infrastructure offerings to consume workloads, data, and applications regardless of their

hosting location.

Can you provide insights into the specific use cases and industry applications where Cloud Computing 2.0 technologies like serverless computing, edge computing, and AI integration are making the most significant impact?

Cloud Computing 2.0 technologies have diverse applications across industries. For instance, in sectors such as web technology, real-time analysis at the point of transaction can help detect fraudulent activities and mitigate potential losses. Moreover, streaming services, cloud gaming, and visual workloads greatly benefit from technologies like serverless computing and AI integration. Micro data centers at the edge play a critical role in hosting recommendation engines and visual analytics, enhancing customer experiences. While specific use cases may vary, the underlying technologies of AI, insights delivered through edge cloud, and real-time streaming analytics contribute to customer experience optimization and operational efficiency.

What are the potential benefits and challenges that businesses across industries might face while adopting and integrating Cloud Computing 2.0 solutions?

Successful adoption of Cloud Computing 2.0 empowers organizations to innovate, improve customer experiences, and optimize operations without compromising performance and security. However, executing this adoption successfully requires careful planning, preparation, and continuous review of strategies. Businesses should partner with experts who understand their transformation vision and possess the expertise to guide them through the journey. It is crucial to ensure a robust multi-cloud solution that offers flexibility, scalability, and seamless deployment of emerging technologies like AI/ML. Businesses must proactively manage inefficiencies and regularly review their strategies to stay ahead of the innovation curve.

> “Cloud Computing 2.0 is shaping the tech landscape by revolutionizing how businesses leverage cloud services. With advancements in hybrid multi-cloud architectures, containerized applications, and AI integration, organizations can achieve unprecedented scalability, cost-efficiency, and innovation, paving the way for accelerated digital transformation across industries.”

How is the Cloud Computing 2.0 paradigm influencing the development and deployment of cloud-native applications and architectures, and what advantages does it offer to organizations?

Cloud-native applications are driving innovation and exceptional customer experiences in the digital economy. They accelerate development cycles by leveraging microservices architecture and continuous integration and delivery (CI/CD). Cloud-native applications built on container-based infrastructure offers advantages such as accelerated development, failure protection through container isolation, easy scalability to handle business needs, and utilization of open technologies for transparency and interoperability. To fully leverage the power of cloud-native applications, organizations need to adopt industry-standard platforms that provide flexibility, support application portability between clouds, and avoid lock-in with proprietary environments. Dell Technologies Cloud offers solutions that enable running traditional and containerized enterprise apps in any cloud environment.

What security considerations and best practices should businesses in different sectors keep in mind while implementing Cloud Computing 2.0 solutions?

Security is a crucial attribute in any IT strategy, as attacks can target organizations of any size or sector. To effectively implement Cloud Computing 2.0 solutions, businesses must go beyond perimeter defense and adopt a proactive approach to protect their infrastructure. It is important to identify and mitigate compromises swiftly, restrict losses, and have robust recovery mechanisms in place. Encryption of data at rest and in transit, implementing a protect-detect-recover methodology, constant monitoring and measurement of traffic at endpoints, and fostering a security-first mindset within teams are critical security considerations. Dell Technologies offers a range of solutions, including consulting services, to help businesses assess vulnerabilities and design robust security frameworks.

As Cloud Computing 2.0 continues to evolve, what future trends or advancements do you anticipate that could have a significant impact on industry-specific use cases and business outcomes?

Cloud Computing, particularly multi-cloud, plays a pivotal role as organizations accelerate their digital transformation journey. The adoption of multi-cloud strategies is becoming essential as businesses recognize that a single cloud may not be suitable for all applications. Factors such as security ownership, application efficiency, and financial operations (finops) influence the choice of the right cloud for each application. Data explosion, especially unstructured data, is driving the demand for analyzing data at its point of creation. This has led to the emergence of edge cloud solutions that cater to real-time analysis requirements, particularly in sectors like telecom, manufacturing, retail, and healthcare. Real-time streaming analytics and a data-first culture are key trends driving industry-specific use cases. Dell Technologies is well-positioned to understand customer requirements and provide consulting services to build robust multi-cloud strategies for accelerated digital transformation.

Cloud Computing 2.0 is Shaping Digital Transformation and Industry-Specific Innovation: Yotta

DR. SAYED PEERZADE
EVP & Chief Cloud Officer of Yotta

In this interview, Dr. Sayed Peerzade, EVP & Chief Cloud Officer of Yotta, shares his insights on the transformative impact of Cloud Computing 2.0 on the technology landscape and digital transformation efforts across industries. In a detailed interaction with Amit Singh, he highlights the specific use cases and industry applications where technologies like serverless computing, edge computing, and AI integration are making a significant impact. Dr. Peerzade also discusses the potential benefits and challenges of adopting Cloud Computing 2.0 solutions, as well as the security considerations and future trends shaping industry-specific use cases and business outcomes

How do you see Cloud Computing 2.0 shaping the overall technology landscape and digital transformation efforts across industries?

Cloud Computing 2.0 can provide more seamless integration between different cloud platforms, enabling users to move workloads across the multi-cloud environment without any disruptions. The flexibility and scalability offered thus empower businesses to make the most of their data and applications hosted on different cloud platforms while supporting artificial intelligence, and machine learning capabilities – which are also among the key drivers of cloud computing.

Furthermore, its advantages of cost savings, improved productivity, and enhanced agility, make it a vital aspect of digital transformation strategies.

Another important aspect of Cloud Computing 2.0 is its focus on the Edge, which involves processing data closer to the source. This helps reduce latency and improve the performance of applications, particularly those that require real-time data processing. Combined with the increasing adoption of emerging technologies, the need to deliver services seamlessly in real-time is also a key driver behind the growth of next-generation cloud computing. Manufacturing, OTT, gaming, healthcare, retail, etc are some of the sectors witnessing an increasing uptake of cloud computing.

As the digital landscape continues to evolve, the role of next-generation cloud computing in driving digital transformation will only become more prominent. It will provide businesses with new opportunities to innovate and remain at the forefront.

Can you provide insights into the specific use cases and industry applications where Cloud Computing 2.0 technologies are making the most significant impact?

Cloud Computing 2.0 is characterized by the emergence of new technologies such as serverless computing and edge computing. These technologies are expected to enhance the capabilities of cloud computing and enable organizations to achieve greater scalability, agility, and efficiency in their operations.

With serverless computing, the infrastructure needed to execute applications is managed by cloud service providers. This sheds IT teams' worries about overseeing infrastructure or servers and enables them to focus on programming. Whereas, organizations can benefit from cost savings, scalability enhancements, and increased agility.

On the other hand, edge computing allows data processing and storage to be carried out near the data source, allowing reduced latency, enhanced performance, and stronger security. This helps address the most pressing needs of organizations currently across sectors – speed, agility, and faster processing.

> "With its focus on the Edge and advancements in serverless computing and AI integration, Cloud Computing 2.0 is driving innovation, enhancing efficiency, and reshaping the way industries operate in the digital age.
>
> The next generation of cloud computing is significantly streamlining the development and testing of cloud-native applications while resulting in faster go-live time."

Top use cases:

Internet of Things (IoT): Deployment of IoT devices such as sensors, cameras, and smart appliances requires fast processing to make split-second decisions, supported by AI. Cloud computing on Edge helps reduce latency and improves response times, enabling the smooth functioning of IoT devices.

Connected Mobility: Cloud computing on Edge can be used to process data from sensors in autonomous and connected vehicles. This enables the vehicles' systems to make quick decisions without relying on a centralized server.

High-Performance Computing: Data and graphic-intensive workloads in industries such as media and entertainment require High-Performance Computing power, which includes huge investments in specialized hardware infrastructure. The next generation of the cloud leverages its computing prowess to deliver high performance for these workloads on a subscription model. Yotta's cloud-powered High-Performance Computing as-a-Service (HPCaaS), for instance, is helping several leading media organizations with their data and graphic-intensive film-making, VFX, and post-production workflows.

It is also powering one of India's leading home-grown cloud gaming companies, The Gaming Project. The company banks upon Yotta HPCaaS to support its platform and deliver real-time and immersive gaming experiences to its users.

AI integration involves combining AI technologies such as machine learning and natural language processing with cloud computing to create intelligent applications. This technology is making a significant impact in the following use cases:

- **Predictive Analytics:** AI integration helps develop predictive analytics applications that can analyze large volumes of data and provide insights into future trends. We are already seeing applications of this in industries such as finance, healthcare, and retail.
- **Chatbots and Virtual**

Assistants: AI integration helps deploy chatbots and virtual assistants that can understand natural language and provide personalized responses to customers. Industries such as banking, insurance, and e-commerce are particularly seeing AI integration in their virtual customer service programs.

In conclusion, Cloud Computing 2.0 technologies such as serverless computing, edge computing, and AI integration are making a significant impact in various industries by improving efficiency, reducing costs, and enhancing customer experiences. A large number of emerging technology use cases demand the performance of cloud computing, not just to operate, but also in the development phase. The next generation of cloud computing is significantly streamlining the development and testing of cloud-native applications while resulting in faster go-live time.

What are the potential benefits and challenges that businesses might face while adopting and integrating Cloud Computing 2.0 solutions?

Cloud Computing 2.0 solutions allow for increased productivity, efficiency, flexibility, and scalability. They also provide seamless scalability, enabling organizations to flexibly adapt their IT resources to meet the evolving business demands.

AI and machine learning integration enable faster decision-making, improved customer service, and higher profitability. Organizations' spending can be channelized to the resources they require, resulting in significant cost savings. The integration of blockchain technology further enhances data compliance and security.

That said, while the benefits of Cloud Computing 2.0 are significant, businesses need to carefully address the associated challenges to maximize the value and mitigate potential risks. Businesses may encounter difficulties implementing and integrating Cloud Computing 2.0 technologies.

Privacy concerns arise as more data is stored in the cloud, requiring businesses to prioritize data security against unauthorized access or breaches. Moreover, the adoption of advanced technologies like AI and machine intelligence may lead to a skills gap within organizations. Businesses may also need to invest in training programs to ensure their staff effectively manage and leverage these new technologies.

While businesses are bullish on multi-cloud, cloud bursting, and edge, they often face the challenge of accessing these solutions under one roof, which results in dependencies on multiple service providers. Addressing this, Yotta has built an extensive range of hybrid, multi-cloud services that allow enterprises to get the best of all worlds without the hassles of dealing with different vendors.

What security considerations and best practices should businesses keep in mind while implementing Cloud Computing 2.0 solutions?

Cloud Computing 2.0 solutions have revolutionized the way businesses operate; however, this also comes with security concerns that must be addressed. Some security considerations and best practices that businesses should keep in mind while implementing Cloud Computing 2.0 solutions include:

Data Encryption: Encrypting data before storing it in the cloud is crucial to protect it from unauthorized access. It is important to ensure that encryption keys are kept secure and not stored alongside the encrypted data.

Access Management: Businesses need to ensure that only authorized personnel have access to sensitive data stored in the cloud. This can be achieved by implementing strong access controls such as two-factor authentication, role-based access control, and regular password updates.

Backup and Recovery: Businesses should implement regular backup and recovery procedures to ensure that data can be restored in case of a security breach or natural disaster.

Monitoring: Regular monitoring of cloud resources can help detect any suspicious activity or potential security threats.

As Cloud Computing 2.0 continues to evolve, what future trends or advancements do you anticipate that could have a significant impact on industry-specific use cases and business outcomes?

One of the most notable trends in Cloud Computing 2.0 is the increasing adoption of hybrid cloud solutions – a combination of public and private cloud infrastructure – to provide greater flexibility and scalability. This approach allows organizations to leverage the benefits of both public and private clouds, while also addressing concerns around security, compliance, and data governance.

Another trend is the rise of edge computing, which involves processing data closer to where it is generated, rather than sending it all to centralized cloud servers. This approach can help reduce latency and improve the performance of applications that require real-time data processing, such as IoT devices, autonomous vehicles, and augmented reality applications.

Additionally, cloud providers are expected to continue investing heavily in artificial intelligence (AI) and machine learning (ML) capabilities, which can help organizations automate routine tasks, improve decision-making processes, and gain deeper insights into their data.

These trends and advancements are likely to have a profound impact on how businesses operate and compete in the years ahead.

Cloud Computing 2.0 will drive the Next Phase of Digital Transformation: IDC

RAJIV RANJAN
Associate Research Director,
IDC

In this interview with Rajiv Ranjan, Associate Research Director, IDC, Amit Singh explores the realm of Cloud Computing 2.0 and its impact on technology landscapes and digital transformation efforts across industries. Amidst the challenges posed by the COVID-19 pandemic, the rapid adoption of cloud services has presented new demands and complexities. Rajiv sheds light on the key technologies driving the next phase of innovation and transformation in the cloud market, addressing evolving business needs and providing insights into use cases, benefits, challenges, and the influence of cloud-native applications and architectures

How does Cloud Computing 2.0 shape the overall technology landscape and digital transformation efforts across industries?

During the COVID period and immediately after that, the adoption of cloud services was quite strong and fast for business continuity, and support virtual workforce. The public cloud grew largely during this period. However, this led to new set of demands and challenges. Customers went to the public cloud in a hurry without understanding the services in detail, whether an application needs to be on-premises or on the cloud, and with little understanding of application best-fit scenarios. This led to higher cloud costs, performance issues as well as heightened security concerns as applications were not on-premises. In addition to that, a virtual or a hybrid workforce would generate data at many remote locations through their devices. Capturing, managing, and utilizing this data has come up as a big challenge.

The next phase of technologies that will see a hike in demand in the cloud market are already and would continue to address the above issues:

- Hybrid multi-cloud architectures for application best-fit scenarios, avoid vendor lock-in
- Growth of private cloud in India due to the need for higher performance, greater control of applications, and regulations, and utilizing the existing skills of IT teams.
- Containerized applications supported by Kubernetes which would drive microservices architecture. Helps to further increase compute resource utilization, and run and manage individual applications efficiently.
- Serverless computing for short-term computing requirements where end users want to pay only when they use compute resources and do not want to deal with sourcing and configuring compute instances on the cloud.
- Artificial intelligence is probably the hottest topic now. AI applications will grow fast and would be driven by public cloud services. The need for process automation, improving customer experience, higher operational efficiency, and the design of innovative products are key drivers.
- Data modernization: Next-generation cloud databases and data lakes will see higher adoption as organizations struggle to manage and extract valuable insights from enterprise data. One of the other challenges is the inability to share operational data with key stakeholders due to data being captured in different formats, poor data quality, and governance issues.

Cloud computing 2.0 will certainly drive the next phase of digital transformation as it will help modernize the current legacy IT infrastructure to make it digitally fit and ready for the next wave. Cloud computing will drive modernization and enable the implementation of next-gen technologies like AI, IoT, Blockchain, Kubernetes, Data lakes, etc. Modernization would be largely driven around 3 areas: Infra modernization, Application modernization, and Data modernization.

> “Customers went to the public cloud in a hurry without understanding the services in detail, whether an application needs to be on-premises or on the cloud, and with little understanding of application best-fit scenarios.”
>
> “Micro-services architecture is enabled by cloud computing 2.0, which helps cut down on heavy resources and complexities of traditional virtual machines.”

What are the key drivers behind the emergence of Cloud Computing 2.0 and its response to evolving business needs in various sectors?

Here are the drivers of cloud computing 2.0:

- Need for increased business agility and digital business innovation
- Better data-driven decision-making to service customers better and drive process improvements
- Need for increasing customer experience and satisfaction
- Employee productivity improvement

Business priorities have changed and the above-mentioned points are the top priorities for enterprises today. To support this, digital transformation is imperative and hence need for next-generation cloud technologies

What are the specific use cases and industry applications where Cloud Computing 2.0 technologies make the most significant impact?

A few of the use cases are:

- AI: KYC verification, customer onboarding for bank and insurance customers
- Edge computing: Oil exploration sites, local computing, and IoT solution requirements in manufacturing layout site locations
- Data lakes, analytics: Creating hyper-personalized products and services by retailers for their customers, personalized financial products on mutual funds, stocks based on customer data on their internet browsing, and their interests.

What are the potential benefits and challenges businesses may face while

adopting and integrating Cloud Computing 2.0 solutions?

Here are the benefits of adopting Cloud Computing 2.0 solutions:

- Flexibility/Mobility – Enables Hybrid workplace as applications can be accessed from anywhere, allowing employees to work from anywhere, at any time
- Automate existing processes and streamline them
- Increased Agility & Scalability that enables bringing new products faster to market. Responds efficiently to peak business needs
- New Revenue Streams - Companies can launch new innovative digital products and services
- Cut CAPeX costs by migrating to the cloud or as a service model.

However, there are many challenges that enterprises face:

- Lack of adequate skill sets to manage the transition to new technologies and manage them
- Difficulties in integrating well with on-premises applications, other public cloud services, and edge
- Performance and Reliability depending on applications and workloads
- Build a common control plane to manage different workflow and management tools of service providers
- Unified security monitoring and management systems across public clouds
- Modernization costs could go higher than allocated budgets due to a lack of visibility
- Poor data quality, governance, and security challenges

How does the Cloud Computing 2.0 paradigm influence the development and deployment of cloud-native applications and architectures, and what advantages does it offer organizations?

Cloud computing 2.0 is significantly driving application modernization. Transforming legacy applications to cloud-native architecture is essential now. Technologies under the 2.0 phase drive the following:

- Helps to decide whether a legacy application needs to be re-hosted (lift and shift), or re-architected, rewritten, or refactored based on business priorities. Cloud computing 2.0 enable these technologies and helps turn legacy apps to cloud-native
- Micro-services architecture is enabled by cloud computing 2.0, which helps cut down on heavy resources and complexities of traditional virtual machines. Also, helps manage, and edit applications in isolation.

Indian IT & Business Services Market Records 7.4% YoY Growth in 2022

The Indian domestic IT & Business Services market achieved a valuation of USD 13.87 billion in 2022, experiencing a 7.4% year-over-year (YoY) growth, as reported by the International Data Corporation (IDC) Worldwide Semi-annual Services Tracker. This growth rate exceeded the 7.2% recorded in 2021, driven by the digital transformation initiatives undertaken by Indian enterprises.

Despite macroeconomic uncertainties like the war in Ukraine, high-interest rates, and inflation, the Indian IT services market demonstrated resilience. Enterprises continued to invest in digital transformation to enhance customer experience, improve operational efficiency, and increase agility. Key technology areas of investment included cloud computing, analytics, artificial intelligence/machine learning (AI/ML), and security, which are expected to remain crucial in the coming years.

Harish Krishnakumar, Senior Market Analyst, IT Services, IDC India, stated that factors such as an impending recession and high inflation are not anticipated to significantly impact the Indian IT services market in the near term. However, certain segments may experience a slight slowdown due to reduced discretionary spending and delayed decision-making.

The IT Services market contributed 78.1% to the overall IT & Business Services market and achieved an 8.1% growth in 2022, surpassing the 7.9% growth of the previous year. IDC forecasts a compound annual growth rate (CAGR) of 8.0% for the IT & Business Services market between 2022 and 2027, reaching USD 20.42 billion by the end of 2027.

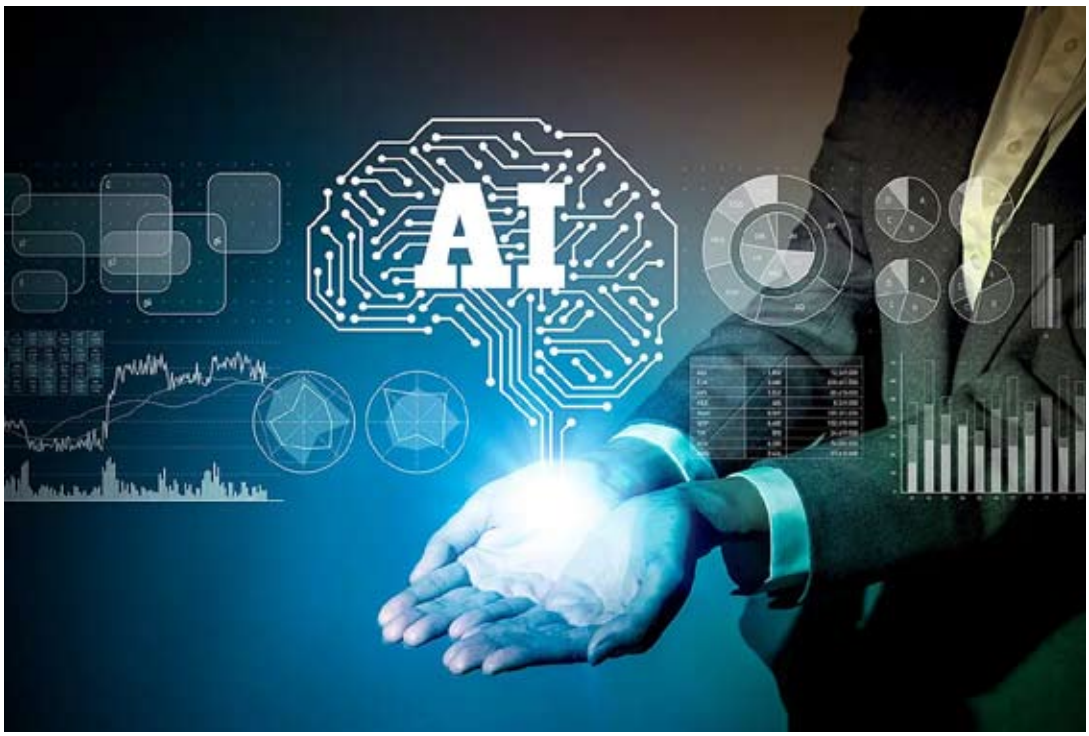
IDC classifies the IT & Business Services market into three primary segments: Project-Oriented, Managed Services, and Support Services. In 2022, project-oriented services exhibited the highest growth rate at 8.0%, followed by managed services at 7.2%, and support services at 6.4%.

The demand for hosted application management and hosted infrastructure services remained robust, as enterprises continued to engage IT service providers for managed cloud services and hosting solutions. Additionally, there was an increased focus on network consulting and integration services, enabling accelerated network transformation through the adoption of more efficient networking technologies. The system integration segment experienced growth driven by increased adoption of cloud computing, AI/ML, analytics, and other advanced technologies.

Neha Gupta, Senior Research Manager, Software and IT Services Market, IDC India, emphasized the impact of inflation on IT spending and the growing emphasis on investment optimization to achieve optimal returns. She predicted a substantial rise in the adoption of cloud services, facilitated by agile and scalable pricing models such as consumption-based and outcome-based pricing structures. The Indian market is expected to witness significant traction in cloud service adoption as organizations strive to efficiently manage their hybrid infrastructures.

The growth of the Indian IT & Business Services market signifies the ongoing digital transformation journey undertaken by Indian enterprises, leading to enhanced operational capabilities and improved customer experiences.

Marketers Embrace Generative AI as 60% Expect Transformation, but Accuracy Worries Persist



New research conducted by Salesforce reveals that generative AI is poised to revolutionize the role of marketers, potentially saving them over five hours of work per week, equivalent to more than a month per year. However, while marketers view this technology as transformative, they also emphasize the need for human oversight, trusted customer data, and training to ensure its successful implementation.

The study, part of Salesforce's Generative AI Snapshot Series, surveyed over 1,000 marketers and found that 51% are currently utilizing generative AI in their work. An additional 22% plan to adopt it in the near future, indicating that nearly three-quarters of marketers will soon be leveraging this technology.

Despite the growing adoption, a significant portion (39%) of marketers express uncertainty about the safe use of generative AI. They raise concerns regarding its accuracy and advocate for human oversight, proper training, and access to reliable customer data as crucial factors for effectively harnessing the technology in their work.

While generative AI is already being employed for tasks such as content creation (76%) and copywriting (76%), marketers foresee a comprehensive transformation of their roles. Over half (53%) of respondents consider generative AI a game changer, highlighting its potential to revolutionize data analysis, personalize messaging content, build marketing campaigns, and optimize SEO strategies.

Marketers using generative AI also anticipate saving valuable time, allowing them to focus on more strategic endeavors. A significant majority (71%) believe that generative AI will eliminate mundane tasks and enable them to engage in higher-level strategic work. In fact, marketers estimate that generative AI can save them over five hours per week, equivalent to more than a month per year.

Marketers emphasize the importance of accuracy and quality, which are heavily reliant on data. However, 67% of respondents state that their company's data infrastructure is not adequately prepared for generative AI. Paradoxically, an almost equal number (63%) acknowledge the significance of trusted customer data for successful generative AI implementation. Experts echo this sentiment, emphasizing that high-quality and reliable data are crucial to avoid biased or flawed outcomes.

Concerns also arise regarding generative AI's lack of human creativity and contextual knowledge. A considerable 66% of marketers believe that human oversight is necessary to effectively utilize generative AI in their roles.

Although marketers recognize the potential of generative AI, many feel unprepared to fully capitalize on it. Approximately 43% admit to not knowing how to maximize the value of the technology. Furthermore, while 54% of marketers consider generative AI training programs important, 70% indicate that their employers do not currently provide such training.

Stephen Hammond, EVP and GM, Marketing Cloud, Salesforce, highlights the transformative potential of generative AI for marketers, enabling more personalized, automated, and effective campaigns at scale. He emphasizes the need for companies to consolidate their first-party data and leverage trusted AI innovations to ensure safety and accuracy in the adoption of generative AI.

Salesforce Introduces Marketing GPT and Commerce GPT to Revolutionize Personalized Experiences with Generative AI

Salesforce has unveiled its latest offerings in generative AI, introducing Marketing GPT and Commerce GPT. These innovative products aim to revolutionize the way marketers and brands engage with their customers, providing personalized experiences and dynamic buying journeys.

With Marketing GPT, marketers will have access to a range of powerful features. They can automatically generate personalized emails, create smarter audience segments, and design effective marketing journeys. This empowers marketers to deliver tailored and engaging experiences across various touchpoints, optimizing customer engagement.

On the other hand, Commerce GPT enables brands to deliver highly customized shopping experiences and personalized offers. By harnessing the power of generative AI and dynamic buying journeys, brands can adapt their offerings to meet the specific needs and preferences of individual customers. This level of personalization enhances customer satisfaction and drives customer loyalty.

The significance of generative AI in the marketing landscape is evident, as 60% of marketers believe it will fundamentally transform their roles. Furthermore, a staggering 71% of marketers state that generative AI will allow them to focus on more strategic tasks, boosting productivity and efficiency. However, accuracy and quality remain the primary concerns for marketers, with 63% emphasizing the importance of trusted customer data for the successful implementation of generative AI.

Marketing GPT, combined with Data Cloud, provides marketers with powerful tools to enhance their strategies:

- Segment Creation: Marketers can create audience segments quickly, improving targeting by leveraging natural language prompts and AI-driven recommendations based on trusted data from Data Cloud.
- Email Content Creation: This feature automates the process of generating personalized emails, leading to improved testing and engagement.
- Segment Intelligence for Data Cloud: By connecting first-party data, revenue data, and third-party paid media data, marketers gain a comprehensive view of audience engagement, enabling better decision-making and improving marketing ROI.
- Rapid Identity Resolution, Segmentation, and Engagement: This functionality automatically resolves customer identities and refreshes segments in Data Cloud, ensuring accurate and up-to-date targeting.
- Typeface Integration: Within Marketing GPT, marketers can leverage Typeface's generative AI content platform to create contextual visual assets aligned with their brand voice, style guides, and messaging.

Commerce GPT, in conjunction with Data Cloud, empowers brands to deliver customized commerce experiences:

- Goals-Based Commerce: This cutting-edge tool allows businesses to set targets and goals, providing actionable insights and proactive recommendations to achieve desired outcomes, such as improving margins and increasing average order value (AOV).
- Dynamic Product Descriptions: By automatically filling in missing catalog data, Commerce GPT enhances merchant productivity and transforms the customer experience with auto-generated product descriptions tailored to each buyer.
- Commerce Concierge: This feature facilitates personalized and engaging conversations, enabling shoppers to effortlessly discover products through natural language interactions across various channels, from digital storefronts to messaging apps.

To facilitate the adoption of Marketing GPT and Commerce GPT, Salesforce partners like DEPT, Media. Monks, NeuraFlash, and Slalom are actively building a generative AI ecosystem. These partners are developing accelerators, integrating large language and data models, and offering seamless implementations, reducing cost and complexity for businesses.

The availability of these new offerings is as follows:

- Segment Creation will be in pilot later this summer, and generally available in October 2023.
- Email Content Creation will be in pilot in October 2023, and generally available in February 2024.
- Rapid Identity Resolution will be generally available in October 2023 and Rapid Segmentation will be generally available later this summer.
- Segment Intelligence for Data Cloud will be generally available in October 2023.
- Dynamic Product Descriptions will be generally available in July 2023.
- Commerce Concierge will be in pilot in October 2023, and generally available in February 2024.
- Goals-Based Commerce will be in pilot October 2023, and generally available in February 2024.
- Data Cloud for Commerce is available now.

Channel Point

Cloud Computing 2.0: Revolutionizing Technology with Cutting-Edge Advancements and Opportunities for Channel Partners and Solution Providers in India.

Cloud computing has been a game-changer in the field of technology, providing businesses with the flexibility, scalability, and cost efficiency required to compete in today's fast-paced market. However, as the technology landscape continues to evolve, Cloud Computing 2.0 represents the next phase of innovation and transformation, introducing cutting-edge technologies and advancements that are revolutionizing the industry.The emergence of Cloud Computing 2.0 is being driven by the need to address the evolving needs of businesses in various sectors. As companies continue to adopt digital transformation strategies, they require cloud services that can keep up with their demands for agility, scalability, and cost efficiency. Cloud Computing 2.0 is designed to meet these needs by introducing new technologies that enable businesses to stay competitive and thrive in today's market.

One such technology that is contributing to the scalability and cost efficiency of cloud services in the market is serverless computing. This technology allows businesses to execute code without the need for infrastructure management, providing a more streamlined and cost-effective solution for running applications. Its adoption is growing across industries, with many companies leveraging its benefits to improve their cloud services.

Another technology that is shaping the cloud market is edge computing, which enables real-time processing and reduces latency. This technology is particularly useful in applications that require low latency and high bandwidth, such as autonomous vehicles and smart cities. Its adoption is on the rise, with many industries leading the charge in leveraging its benefits.

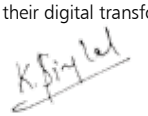
Quantum computing is also playing a significant role in advancing cloud services and technologies in the market. This technology has the potential to revolutionize how businesses process data, providing faster and more efficient solutions than traditional computing methods. While still in its early stages, the progress of quantum computing in the context of the cloud market is promising, and many companies are already exploring its potential.

The integration of AI technologies is another area that is transforming businesses' automation and decision-making capabilities. By leveraging AI in cloud services, companies can automate and optimize their processes, enabling them to make better decisions faster. These advancements are already being seen in the market, with many companies adopting AI integration to improve their cloud services.

Containers and Kubernetes are also contributing to the development and deployment of scalable cloud-native architectures in the market. By providing a more efficient and streamlined way of managing applications, these technologies are driving cloud-native solutions and enabling businesses to stay competitive in today's market.

According to a report by Nasscom, the cloud computing market in India is expected to reach $7.1 billion by 2022. This presents a significant opportunity for channel partners and solution providers to tap into a growing market and offer innovative cloud solutions to businesses. With the emergence of Cloud Computing 2.0 and the adoption of cutting-edge technologies, channel partners and solution providers have the opportunity to differentiate themselves by offering advanced cloud services that can provide businesses with enhanced flexibility, scalability, and cost efficiency.

To capture a significant share of this lucrative market in India, channel partners and solution providers need to stay up-to-date on the latest trends and technologies shaping Cloud Computing 2.0. They should position themselves as trusted advisors and strategic partners to businesses looking to leverage the power of the cloud. Skilled professionals and experienced providers are needed to help businesses navigate this complex landscape and leverage the full potential of cloud computing. By offering customized solutions, innovative services, and exceptional customer support, channel partners and solution providers can provide businesses with a competitive edge and help them achieve their digital transformation goals.



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