

The Anatomy of Rebuilding & Recovery

A CEO LOUNGE INITIATIVE

The Many Silver Linings of Hybrid Cloud

In conversation with



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The Many Silver Linings of Hybrid Cloud



Hybrid cloud technology is a preference among many businesses today. With its promise of flexibility, agility, scalability and easier data analytics, embracing a hybrid world has fast become a priority for many. Hybrid cloud became the ideal computing architecture during the pandemic by being available on-demand, and the early adopters of the cloud have outperformed competitors at various levels. However, it also entails potential visibility and management challenges. In the first part of this two-part series, CEO Lounge brings together some of the country's top CIOs and CTOs to discuss the hybrid cloud promise.

Words by **Divya Sista**

Hybrid cloud, a computing environment that brings together an on-premises data centre hub or a private cloud with one or more public clouds and proprietary software, has flexibility as its unique selling proposition amongst other advantages. It allows for communication and exchange of data between services and largely works on an 'on-demand'

model as budgets and requirements fluctuate. As processing demand increases, say, in the case of a cyclic or seasonal business, forcing enterprises to look beyond the data centre's capability, the cloud offers a quick, reliable fix to scale almost instantaneously. Purchasing, installing and keeping servers running for a dynamic load is not just capital intensive, but may not seem the smartest choice either.

“Hybrid cloud is essentially an environment where the application and data move from public cloud to a private cloud as an exchange of data and the application lives in both the worlds. With advancements in cloud computing and management, most CIOs are confident of moving data to public clouds. That said, the incentive for doing so and the relevance must be really compelling. We see industries across domains talking about a hybrid cloud architecture where the data in a data centre is behind a firewall and the front-end applications move to the cloud to get scalability and speed. These are all steps in the hybrid cloud direction,” explains Hemant Chadha, Senior Vice President (Technology), Velocis Systems.

CLOUD TRANSITION: THE FLEXIBILITY FACTOR

Hybrid cloud is fast becoming the go-to computing environment model for enterprises around the world with many viewing it as an ideal architecture for

their organisations. Though this shift has been accelerated by the pandemic, the concept and idea of cloud computing and hybrid architecture aren't new. Hybrid, public and multi-cloud adoption and deployment have seen a significant rise over the past decade.

“Even five years ago, we would have been sceptical about moving sensitive data onto the public cloud, owing to security and privacy concerns. But there is a comfort factor that comes in from the cloud solution provider today, like Azure or AWS, who have themselves invested in terms of compliance and security. Emerging markets follow suit. The hybrid architecture allows us to strike a balance between security and ease,” says Madhavi Kanumoor, CIO, Healthcare Global Enterprises.

Since all existing organisations have some form of architecture and an on-premise set up in place, moving to the cloud is no less than a seismic shift. Despite all claims of ease and operability, the process of migration is not pain-



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free. A deep understanding of legacy application architectures and hybrid cloud platforms is a must.

What makes hybrid cloud a desirable proposition is its ability to deliver the best of both the private and public cloud worlds. It allows you to shuttle between platforms, dictated by just one factor — the organisation’s demand. Another interesting feature is how it allows elegant organisation, bringing in a structure by partitioning applications, compartmentalising them so that the components can reside on both the public cloud and on-premises.

“The whole crux of hybrid cloud is in how you delink the underlying hardware. For some organisations, it may take the form of platform as a service, while for some it could be software as a service or even infrastructure as a service. Kubernetes and compartments are technologies that enable these transitions. Hybrid cloud is that one piece

in the overall jigsaw puzzle of deploying applications,” remarks Prasad Patil, COO, Arya Infosystems and CTO, JM Baxi Group.

THE HYBRID CLOUD PROMISE — TALLER, HIGHER, BIGGER

With a hybrid cloud, organisations can allot lesser resources to host applications and data onto the platform that delivers the best for them. They can pick and choose their right mix of cost efficiency, performance and security and shift load-heavy applications onto the cloud, while they test new projects. For instance, a big data application requires extensive processing capabilities and expensive storage systems. It could run better in terms of cost and performance on a public cloud, where sensitive data is still hosted on a private cloud to ensure it ticks off all the boxes in the risk management matrix.

The cloud could be a decade old, and while over 77 per cent of industry leaders¹

¹ Oxford Economics, “Greater than the sum of their parts: How cloud and AI work together.” Executive Summary, September, 2020.

are sure that this technology would be a game-changer in more ways than one, most enterprises have taken their first steps towards it only recently.

Kickstarting the process is one thing, while the whole transition is another. It is an on-demand technology, but the transitional cost, security and the idea of 'why cloud' are a few concerns. Indian enterprises are turning to the cloud in significantly larger numbers as compared to their counterparts in the rest of the world. A recent survey reveals a 63 per cent increase in investment in hybrid cloud by Indian companies, way more than the 43 per cent global rise. The survey further says that 97 per cent of Indian enterprises see hybrid cloud as an ideal architecture for their organisations².

"Moving to the cloud is a journey. Irrespective of small footprints, co-hosted services and peripheral virtual machines, the confidence of enterprises to move the setup to public clouds is on the rise. The change in the mindset, that here is a world where data can safely reside outside your office is a huge shift. It operates on a

simple premise — if you can show value, the journey to the cloud is easier," says Abhishek Gupta, President - IT, Dish TV.

The optimal way to go about it is to select the right applications to onboard the cloud first. This involves a detailed understanding of what each application does, assess the migration impact and the value additions it brings vis-à-vis the existing on-premise set up. A value-based migration, starting with the applications that would add the most value when moved to a cloud architecture is an ideal starting point. Technology trade-offs, data governance and security are the parameters that come next.

"If the transactional/data load is high, it spawns on the public cloud, and returns to on-premise when there isn't much load is the general idea of a hybrid architecture. Another spin-off on this premise is the idea of hybrid cloud being a combination of hosting applications in the public cloud while some continue to reside on-premise," informs Gupta. "OEMs today take care of industry-specific security compliances. This has



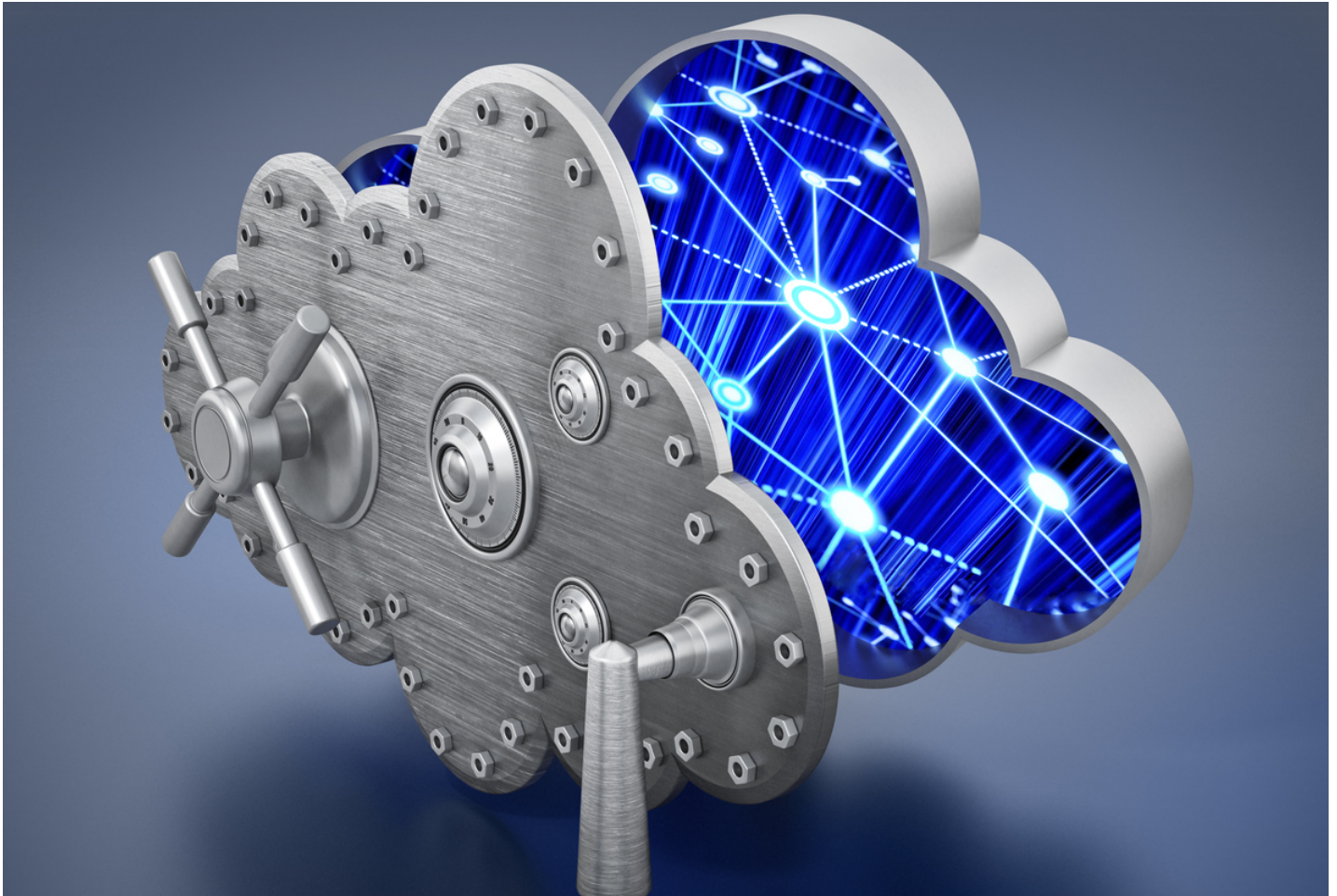
"The crux of hybrid cloud is in how you delink the underlying hardware. For some, it may take the form of platform as a service, while for others it could be software as a service..."

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² <https://www.nutanix.com/enterprise-cloud-index#background-and-research-goals>



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brought down the friction to have things on the public cloud largely. With security being taken care of, the trade-off is in now in favour of the public cloud," he adds.

Hybrid cloud, multi-cloud and cloud computing have acquired a buzzword status and are often marketed interchangeably by solution providers. An advanced term coined to denote the combination of on-premises infrastructure and public clouds in the 'pragmatic hybrid cloud'.

"The journey to the public cloud has just begun. As part of our overall IT strategy, our impetus is to move to a more centralised applications footprint from a decentralised footprint. From an IT standpoint, when businesses expand through M&A or partnerships, the footprint gets decentralised, and the underlying IT architecture would be to move to a private cloud that hosts these applications centrally, or look at hybrid architecture, or completely on a public cloud. Public cloud providers are looking at this aspect of interoperability in a big way. When you are looking at data end to end, interoperability and

connecting it across a unified data source is paramount," says Kanumooru.

A SUBSET OF SOLUTIONS VS A COMMITMENT TO INFINITY

The initial mindset of both organisations and solution providers with cloud hosting was like a migration dream — pick up everything and move, we'll see you in cloud paradise. As time progressed, the cost challenges could no longer be ignored. This led to solution providers explore subset solutions in the cloud, like partial hosting and data analytics, and get a flair of the cloud on-demand as opposed to the infinity promise.

"Many businesses are cyclic. So, while we may move SAP and HANA to the cloud, we have to decide what stays on-premises after looking at things through a return-on-investment lens. We must also take into account the software fabric that has matured now, which enables a seamless burst onto the cloud," explains Patil.

A brilliant piece of technology that is not cost-efficient doesn't push its case for commercial success. However, that is not the only factor.

"The pandemic has dramatically changed how people consumed technological services. While some struggled with sustainability, some struggled with growth. The answer cloud gave to the question of how one can keep the organisation afloat while not compromising on performance and costs has resonated well with organisations. The weight of an on-premise architecture can be a burden during times like the Covid-19," says Harnath Babu, CIO, KPMG India.

The hybrid cloud with its subset of solutions has forged ahead by donning an on-demand avatar, where it comes with a certain set of built-in features and everything else can be customised. To add, there is no major requirement from the IT Ops team when it comes to data analytics, there is a possibility of a common security layer between on-premise and public cloud, there is better cross-cloud governance, and the organisation is abstracted from changes.

"The cloud is a winner in two aspects. First, it provides a system of records, comprising of SAP, Oracle and all other core business applications; and second, it gives a system of engagement — agility that you need to deal with. The public cloud comes in very handy when we are dealing with spikes. At the end of the day, you can design your architecture in a way you want," analyses Babu.

THE START-UP CLOUD DILEMMA: MULTI-CLOUD VS HYBRID CLOUD

Start-ups are getting increasingly popular, receiving rightly deserved impetus from across industries. They do not have legacy architecture and are a clean slate. While there is no migration hassle to deal with, a lack of access to funds and resources is an issue that needs attention. Despite ranking high on innovation, abreast with the latest technologies, the lack of a legacy also means building other processes like marketing, infrastructure and logistics from scratch. The hybrid cloud infrastructure is a great answer to many start-up perils, including coordination of remote workspaces between team members.

Leading businesses and start-ups alike are leveraging the hybrid cloud platform's ease with interoperability, better handling of artificial intelligence and machine learning, and security guarantee. That said, enterprise enthusiasm aside, hybrid multi-cloud adoption may not be everyone's cup of tea. It comes with challenges like streamlined IT management, skill shortages and the need for a multi-cloud orchestration platform depending on the size and complexity of the organisation.



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TAKEAWAYS

The best of both worlds:

The combination of both the public and private cloud allows for better workload management. Flexibility and scalability are among the biggest benefits of moving to a hybrid cloud.

Better security and reduced cost:

Hybrid clouds offer businesses to have more control over their mission-critical data. In the long run, they can significantly lower IT costs.

Incremental yet continuous improvement:

The cloud transition is a journey. As with all emerging tech, this space is constantly improving too.

Complexity is an integral part:

Promising as it may sound, it comes with the complexity of transactional loads, security, AI & ML, and other specialised services.



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