



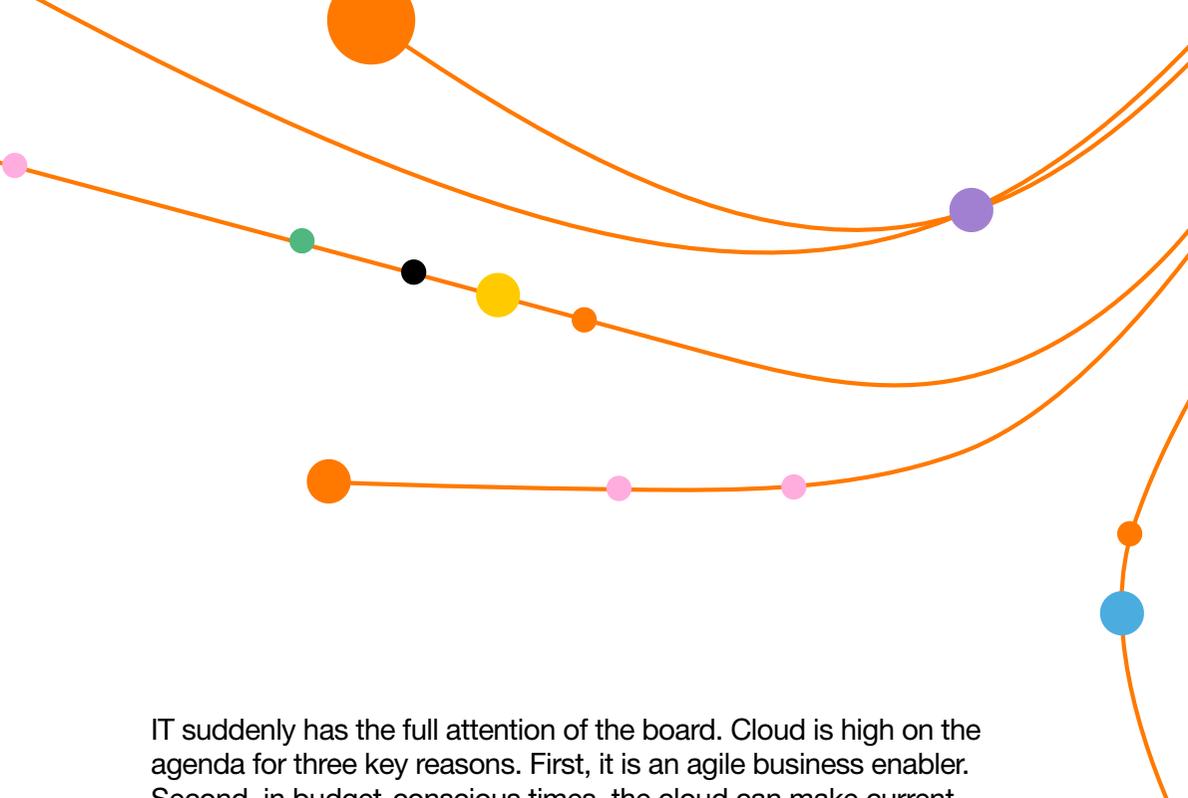
A cloud strategy for the future

IT leaders prioritize cloud for business sustainability in a changing world



**Business
Services**

Cloud: how to get to the future faster



The last twelve months have cemented the importance of cloud as a vital component for doing business. IT leaders are center stage as enterprises look to instigate cloud strategies as fast as possible. The prize: agility, increased resilience, and transformative powers. All essential ingredients to providing a competitive edge in the digital economy.

IT leaders have been pushing for years to get senior management to modernize their technology infrastructure. As digital transformation and new technology adoption speeds up, IT leaders' roles have become more business-driven. According to Gartner, 69% of boards report speeding up digital initiatives as a response to the global health crisis¹. This trend, the analyst firm believes, is an opportunity for IT leaders to leverage their newfound power to cope with their next big challenge: digital business acceleration. Cloud is pivotal to its success.

The position of the CIO is now more robust in business than ever. So much so that 80% of CIOs are educating CEOs and other senior stakeholders on the value of IT, according to Gartner. In addition, 70% of CIOs are assuming leadership of high-impact initiatives. As a result, the roles of CIOs and CTOs especially have moved away from core technology to encompass digital business initiatives, business growth, operational excellence, cost optimization, and an enhanced user experience.

IT suddenly has the full attention of the board. Cloud is high on the agenda for three key reasons. First, it is an agile business enabler. Second, in budget-conscious times, the cloud can make current investments last longer. For example, by re-investing in cloud native, enterprises can make legacy last longer. And third, cloud can help create new business opportunities and revenue streams while getting new products and services to market faster.

Accelerated innovation is essential in delivering increased resilience. This in turn provides the building blocks for transforming the organization.

The next generation of cloud is not just about people, processes, and technology. In this guide we look in detail about how cloud can deliver business outcomes in three key areas: advancing innovation, business resilience and digital transformation.



Cloud to drive enterprise innovation

Cloud is already proving its value in enterprises, creating new business models and revenue streams. For IT leaders, however, balancing innovation with operations is a difficult juggling act.

For most enterprises, the next big step for cloud is to address digital and business innovation. CIOs can educate the enterprise on the possibilities cloud creates and how they can be achieved. Innovation can be complex and disruptive. IT leaders are there to help guide enterprises through the processes using best-in-class technologies.

All businesses today need to be digital players to survive. Cloud offers scalability, flexibility, and speed to market. It allows enterprises to capture and analyze data to provide customer insight, for example, or connect to other businesses through application programming interfaces (API).

The most successful cloud deployments increase business efficiencies, control costs better, and provide a robust platform for innovation, allowing enterprises to adapt according to market changes.

Organizations that increase funding of digital innovation are 2.7 times more likely to be a top performer than a trailing one.²

Innovating in a vacuum is an issue for any IT leader. Whatever level of maturity you are at in the cloud journey, it is crucial to have a partner who can provide technical expertise, innovation support, and co-innovate.

Enterprises already on the cloud journey are no longer looking for a solution. Cloud is now part of a strategic move to define the future of the business. As a result, enterprises need partners that complement the organization's capabilities, be it migration and application enhancement or co-innovation.



What to look for in a co-innovation partner

01

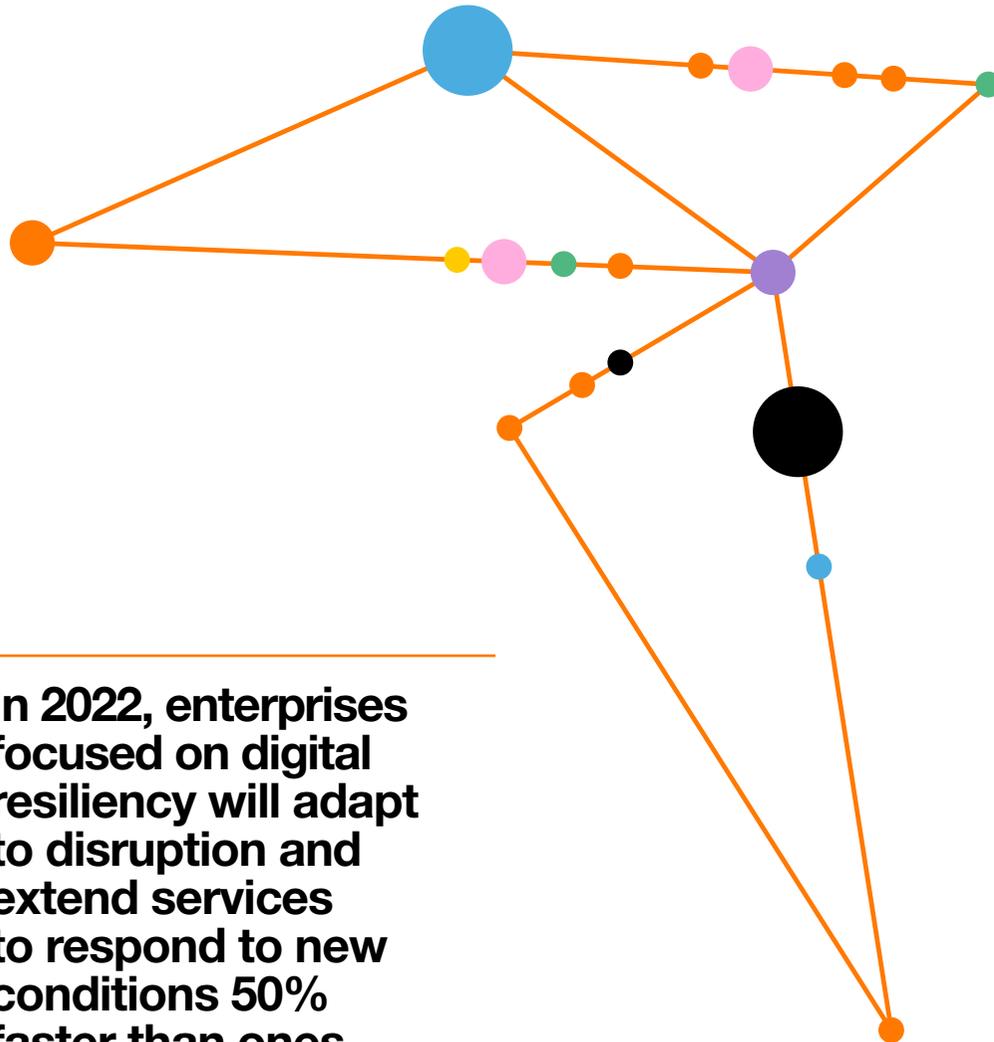
Align with a partner that complements your expertise and offers new skills and technologies for a shorter time to market.

02

Ensure you have a partner that can work on a global scale. There is little value in a partner if you can't take your innovations beyond your territories.

03

Look for a partner that can bring value to the business through convergence, collaboration and co-creation.



In 2022, enterprises focused on digital resiliency will adapt to disruption and extend services to respond to new conditions 50% faster than ones fixated on restoring existing business/IT resiliency levels.⁴

How the cloud can help to achieve business resilience

“Plans are nothing, planning is everything,” said Dwight D Eisenhower, former US President. The same can be said of tailoring cloud to meet business resilience requirements. It doesn’t just happen, it requires careful planning around an enterprise’s IT resilience strategy.

Enterprises have always focused on traditional business resilience, such as the capabilities to respond to business disruptions and restore operations as quickly as possible. Today business resilience requires an enterprise to be agile and rapidly adapt to internal and external changes that could come in the form of disruptions, risks, and even opportunities. This needs to embrace people, process, and infrastructure.

Modernizing IT and applications

Getting legacy applications to perform better is an ongoing headache for IT and they can be costly to update and scale. Cloud has the innate ability to allow these applications to be modernized to optimize their processes, infrastructure, and performance.

To carry out application modernization, enterprises need to assess their application ecosystem, look at where improvements can be made and how they can be achieved. This will require either rearchitecting, rebuilding, or replacing applications. The trick is to select the right application for the right approach.

There are four key approaches to modernizing IT with cloud migration:

Lift and shift: First, is a lift-and-shift approach, the application and data are moved to the cloud without significant changes. Applications are effectively “lifted” from their current environment and shifted to their new hosting premises in the cloud. Lift and shift is the cheapest migration model. You must consider that upfront savings could cost more in the long term if you run into challenges with workload optimization.

Hybrid cloud: Second, is partitioning applications to work in a hybrid cloud environment for the best performance. A hybrid cloud estate has at least one public and private cloud in its architecture. Components can be partitioned so they run on the public and private cloud. The partitioned application is in constant communication with its other half, so essentially runs as one. This provides maximum performance and efficiency.

Replatforming: The third approach takes the middle ground. When an application is replatformed for the cloud it is slightly modified to be more cloud compatible. But it is not cloud native. This is a cost-effective approach and does not require major development. It also lets enterprises move small workloads to the cloud and learn from the experience without committing to full-on cloud migration. Configurations and changes have to be accurately made and tested, or the migration could run into issues.

Refactoring: Finally, applications can be refactored to take full advantage of the cloud environment. By using “cloud-native” features, developers can optimize applications to tap into cloud resources for optimum performance, providing greater resilience and flexibility. Cloud-native and microservices allow applications to change to meet customer demands rapidly. This, however, usually means re-writing applications from the ground up, which is resource-intensive. Refactoring isn’t for cloud novices. It requires advanced DevOps skills and automation.

Gartner³ recommends using the approach that will have the highest effect and value. Rearchitecting is associated with medium costs and risks. Rebuilding or replacing provides better results but comes with more risk and higher costs.

Four tips to successful cloud migration

01

Have a clear cloud strategy of what the business wants to achieve from the cloud.

02

Discovery is core to your cloud migration. Find the gaps in your current processes and which issues can be solved by moving to the cloud.

03

Put a baseline in place mapping workloads to applications and assets. These are crucial to establishing key performance indicators (KPI) that can be tracked to ensure the project is hitting goals. These include response times, application, and service availability.

04

Managing risk is critical. Maintaining data integrity and operational continuity must be monitored during the migration and validated post-migration.



Adopt microservices as part of your cloud migration

Many enterprises are using the opportunity of moving to the cloud to modernize the architecture of their applications with microservices. But it isn't quite as simple as it sounds.

Gartner defines a microservice as “a service-oriented application component that is tightly scoped, strongly encapsulated, loosely coupled, independently deployable and independently scalable.” Microservices enable large monolithic applications to be broken down into manageable components for disparate teams to collaborate on. It also makes them easier to enhance and deploy.

A promise of greater resilience

Microservices come with the promise of greater resilience, such as in fault isolation, better scalability, easier usability leading to greater agility, innovation and faster time to market. But there are also concerns amongst IT teams about complexity, a lack of in-house experience on microservices, which applications to move to microservices, and uncertainty over data security.

Container technologies such as Kubernetes have helped ease complexity, alongside a service mesh to monitor security across services and manage communications. Using containers in the cloud also makes portability much simpler. But, enterprises must be careful. Containers have security limitations, and can be launched rapidly, which can create a container sprawl. They also are very cloud resource-intensive, which can prove very expensive.

IT leaders need to look at application modernization with a different mindset, which reimagines their IT estate based on enhanced security, more speed, and consolidated infrastructures.

Many organizations struggle to build a strategy around application modernization. The skills gap and access to technologies to modernize applications is a significant challenge, especially when it comes to refactoring or building cloud-native services using DevOps microservices. Cloud-native applications run in a containerized environment that allow them to scale and move in and out of the cloud.

However, enterprises are struggling to recruit and build teams experienced in cloud-native technologies such as Kubernetes. This is not going to get easier. Enterprises are increasingly investing in in-house training and turning to partners who specialize in DevOps and cloud migration.

Application modernization is an intimidating task for any enterprise. Changes are inevitable in terms of processes, organization, platform, and data management. A trusted partner can help you carry out a strategic assessment of your applications, define the right applications for cloud migration and recoding legacy applications where necessary.

Organizations now consider 24% of microservice applications to be business-critical, of which 42% would directly result in revenue loss if they suffered downtime.⁵

Three tips to adopting microservices

01

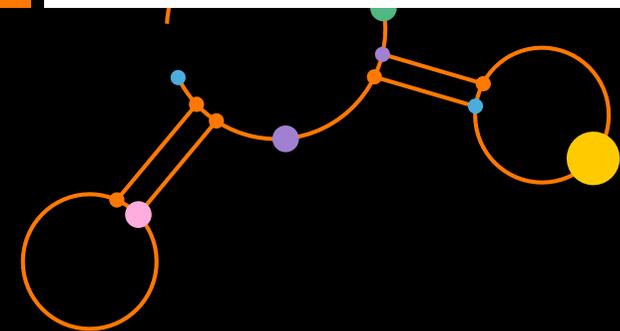
Microservices don't suit all scenarios. Carry out due diligence to make sure your application lends itself to being divided into microservices.

02

Each microservice acts as an independent application. Build agile teams around microservices to speed up deployment.

03

Due to their distributed nature, microservices are more vulnerable to attack. Make sure you instigate a secured microservices framework.





Secure assets in line with compliance and regulations

The regulatory landscape for cloud computing continues to be highly complex, especially if it is moving around a multicloud environment. Effective data governance in the cloud continues to be a concern for business leaders, in particular CIOs.

Digitization is making it difficult for traditional governance to keep up with the way technology and business are changing. As a result, CIOs need to work closely with C-suite executives to update policies and practices in line with digital transformation.

Cloud governance is fundamental to the success of cloud migration and adopting cloud at scale. Cloud adoption without firm governance will ultimately fail. Cloud governance enhances data security and manages risk. It is paramount to making sure data is processed and stored securely.

Governance covers cloud computing policy, cloud provider relationships, cloud solution architecture, and workloads, guiding on managing risks and outcomes. Setting it up can be highly time-consuming.

Managing data in the cloud

Cloud makes accessing data from any place, anywhere easy. This data, however, must be managed under the rules and regulations of the countries in question. Data sovereignty issues are a growing worry for IT leaders and must be addressed from the onset.

Data location is clearly a critical factor when moving to the cloud. Choose a cloud provider with data locations that meet your data sovereignty requirements. You also need to take security and control into account. This is why you must select a transparent partner, one you can trust to be fully compliant and protect your data.

No cloud provider is the same. As part of due diligence, a consultant can help you evaluate cloud providers. Look at where your data will be stored, what security tools are in place, and how compliance requirements are managed.

For enterprises struggling with the administrative side of the cloud, a managed service provider (MSP) may be the answer. They provide the management layer between the enterprise and the cloud provider. This allows the IT team to outsource cloud complexity, freeing up their time for revenue-generating projects. MSPs can also provide a valuable bridge to the cloud, allowing IT leaders to speed up and assess the skills gaps.

Global public cloud end-user spending to grow 18% in 2021.⁶

Three tips to improve cloud data management

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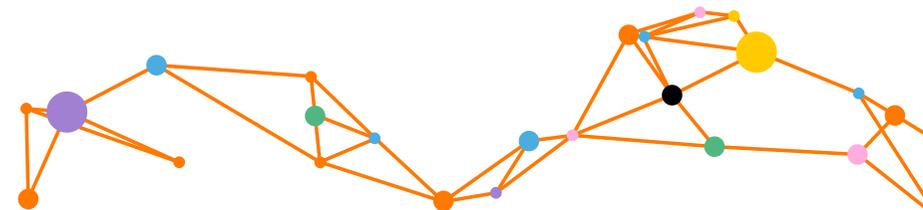
Ensure you have full visibility of all your data.

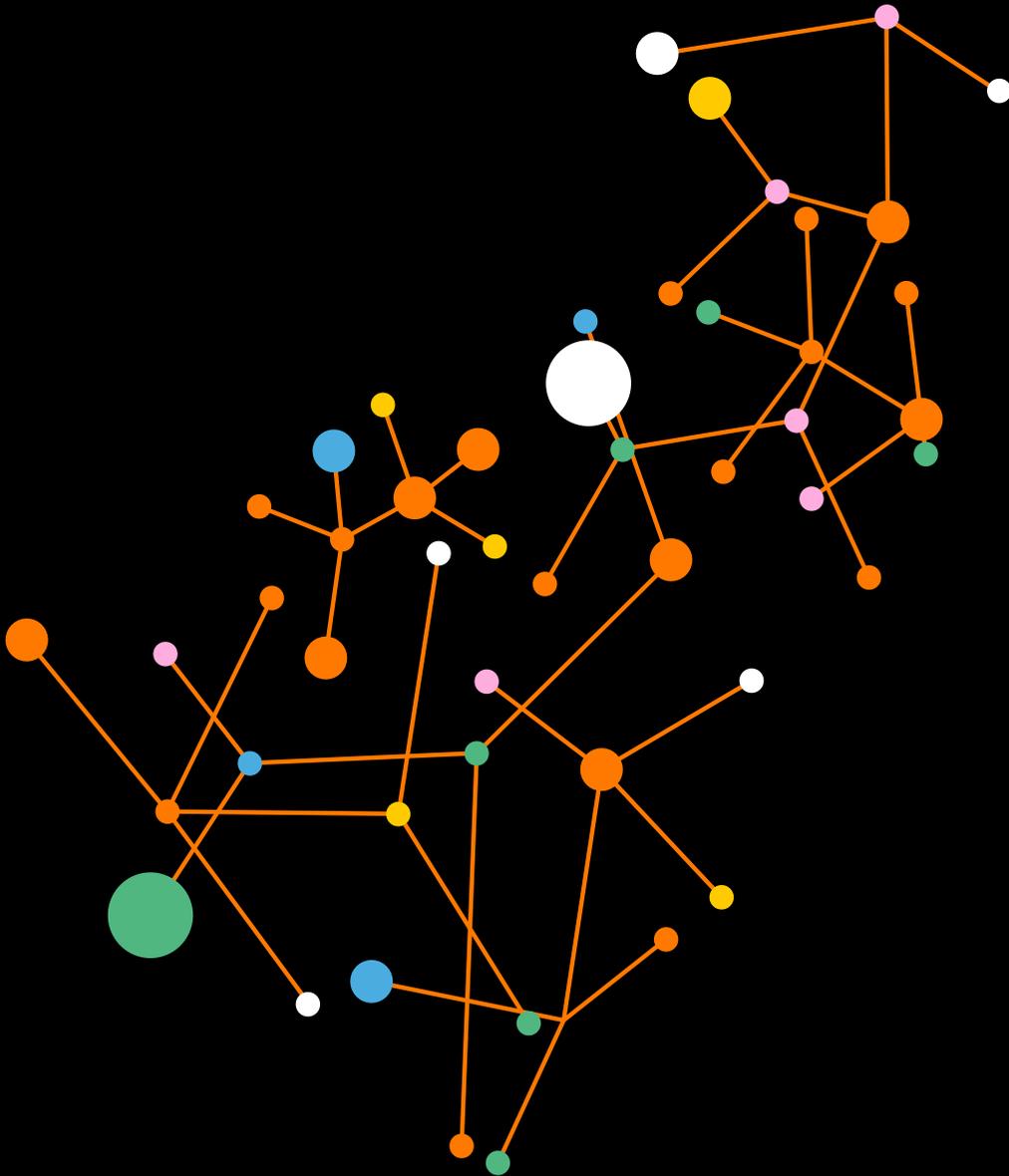
02

Maintain clean data. This means data is accurate and free from duplicates. You only get out of your data the quality you put in.

03

Cloud data governance policies must be audited frequently to enable ongoing compliance with regulatory requirements and identify any security risks.





Plan for transformation with your cloud strategy

Sustaining the pace of digital transformation is proving difficult for IT leaders. The pandemic forced *ad hoc* changes in how businesses needed to operate to survive. Now is time to assess what cloud means for your organization and how it can help achieve business outcomes and capture new sales opportunities.

Although cloud has been vital for business operations over the last few months, companies should not forgo a carefully planned cloud strategy to get to the cloud faster. Cloud is not a destination or a specific technology platform, it is a continuous journey that can deliver on flexibility and agility through automation and agile practices.

Cloud migration can be a complex undertaking. It embraces new models and adds new layers of technology. Going it alone can be a demanding task. This is why IT leaders are increasingly turning to cloud experts to help them plan their end-to-end cloud journey and ensure their cloud environments adapt and grow with the business.

64% of enterprises either will be early adopters of new technology or will aggressively seek out new technologies.⁷

IT leaders need to look at the type of transformation their organization is looking to accomplish with the cloud and then adopt the right technologies to achieve it. This needs to begin with an in-depth evaluation of the current state of operations across the enterprise. Delivering on cloud everywhere for users requires an as-a-service delivery model. This needs careful management to stop costs from spiraling out of control. Passing infrastructure management to a trusted partner can allow IT to take advantage of optimized and predictable costs.

Dealing with the cloud skills gap

The growing skills drought is an enormous challenge for IT leaders, both at cloud infrastructure and security levels. According to Gartner, most enterprises are “flying blind” when it comes to the skills they need for digital transformation.⁸

According to IDC⁹, this ongoing skills shortage is partly due to wider digital transformation initiatives. IT has become more integral to business processes and rapid technology deployment in areas such as cloud and automation means that skills demand is outstripping supply. The analyst firm maintains that enterprises will need to invest in developing, sourcing, and matching skills to remain competitive. Some legacy skillsets can transfer to cloud technologies, but upskilling is required.

The skills gap is a bottleneck to many cloud migrations. In addition to training and transitioning internal staff, a trusted managed service provider can help provide the skills for your preferred cloud infrastructure. This approach also allows in-house workloads to be reduced, enabling IT teams to focus on business-value projects, while allowing enterprises to benefit from a managed service provider’s economies of scale regarding new technologies and skills.



Why Orange

For IT leaders, the cloud is no longer about shifting workloads. It is about bringing complementary services to the cloud that can fuel growth and sustain the business.

Around one-third of cloud migrations fail. Why? Because IT leaders have not understood where and how it is most appropriate to use the cloud. Successfully navigating secure cloud deployment is not easy and requires careful planning. Cloud also requires continuous monitoring to benefit from new functionality and tools. The hyperscalers, for example, are constantly expanding and enhancing their offerings.

If you are going to work with the cloud today, you have to adopt a “born in the cloud” mentality, where services were created for cloud delivery. Bringing legacy thoughts and processes to the cloud environment is setting an enterprise up for failure.

Cloud is a long journey made up of many parts that all need to work in harmony together. All have to be orchestrated to ensure enterprises get the agility, scalability, resilience, and performance benefits cloud promises. This is where a trusted and skilled cloud partner comes in.



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