

5 best practices for adopting cloud at scale

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Moving your enterprise to the cloud: the path to success

Migrating to the cloud is an essential element of many service providers' digital strategies. With cloud success at scale, it becomes easier to realize the pace of innovation needed to compete for customers in a digital-first world. The cloud also increases returns on upskilling people in new ways of working. Yet, many service providers have been slow to embrace cloud computing at scale.

What hurdles stand in the way of cloud success? Strict regulatory requirements complicate enterprise-wide cloud strategies. Yet, many service providers try small, isolated cloud programs. Cloud services are often procured with the simple swipe of a credit card. This can create countless challenges as the enterprise's central IT function loses control of critical infrastructure. These one-off initiatives can breed compliance risks. To take advantage of all that the cloud has to offer, service providers must deploy the cloud at scale, with the support of central IT – not in one-off initiatives.

Operatives must carefully consider, map and align their cloud journeys to the strategies of their enterprises. In this paper, we look at the pains and risks of cloud missteps. Then, we detail best practices for adopting the cloud at scale, and outline an approach that creates a foundation for future success.

Not another proof of concept

You don't need to conduct a proof of concept for a cloud initiative. The cloud is a proven technology platform, with demonstrated security and reliability. But many service providers undertake a proof of concept to assess the feasibility of the cloud. The risk? Slowing your journey to a crawl, while the world of cloud computing advances rapidly around you. At Amdocs, we have over a decade of experience implementing cloud solutions in highly regulated enterprises, and we believe companies should focus on moving to the cloud successfully – not on endless exploration.



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Cloud unchecked: growing pains and risks

Cloud computing places all the resources needed to develop, test and launch new applications and services a few clicks away. For large enterprises, especially those in highly regulated industries, this is precisely what introduces the biggest risks. Cloud consumption can quickly spiral out of control. And without proper operational controls and processes, so, too, can security and compliance.

Plus, despite the maturity of cloud computing, leaders across industries remain confused about the way cloud platforms work. That's true of all the leading (and proven) platforms, including AWS, Microsoft Azure and Google Cloud. Too often, companies adopt the cloud with an app-centric or one-off approach that doesn't serve the larger organization. Ad hoc cloud use expands quickly with little planning or control. Risks grow just as fast. The four top risks are shadow IT, unsecured data, technical debt and consumption woes. Let's look at them...

Four top risks of ad hoc cloud use



One: Shadow IT

Shadow or rogue IT is nothing new, but cloud computing has led to a new wrinkle. Now, lines of business can procure IT resources almost instantly. But operating outside of central IT can compromise the enterprise's security, audit and compliance postures.



Two: Unsecured data

In the cloud, containerization allows memory or storage instances to be spawned in microseconds. But it is not uncommon for containers to be mislabeled. That mislabeled storage represents a data-leak risk.



Three: Technical debt

Ad hoc cloud initiatives (even sanctioned ones) are isolated from the larger enterprise's goals and regulatory requirements. When the larger enterprise moves to the cloud, acting without a strategic plan accrues technical debt that increases costs. That's because applications, security configurations and services need to be reworked.



Four: Consumption woes

The cloud makes it simple to consume IT resources. But not all consumption is good consumption. For instance, if 80% of an organization's applications run on Microsoft SQL server, then spending time and money moving Oracle Database server to the cloud will achieve lower value. Too often, lines of business invest in bleeding-edge areas that produce little ongoing business value.



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Essential cloud best practices

Cloud computing has changed the underlying principles of building and running IT applications. To succeed in the adoption of cloud at scale, it's crucial to initially secure the fundamentals in place to avoid risks, such as technical debt.

It's one thing to migrate a single application to the cloud, but another to achieve cloud at scale. Cloud at scale takes advantage of the elasticity of the cloud to handle more traffic ("scaling out"). It also heightens the ability to scale up, yielding increased release and innovation speed. When successful, the cloud transforms the entire enterprise, making it more agile and able to improve the customer experience. Moving to the cloud should also improve your security posture and support governance and compliance requirements.

Based on our extensive experience helping leading companies migrate to the cloud, we've established several best practices for deploying cloud at scale. These best practices can help initiatives move forward without compromising security or the customer experience.

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Best practice #1: **Adopt a cloud-native, everything-as-cloud approach**

Today, every aspect and layer of IT is becoming software defined. Achieving repeatable success in the cloud requires users to embrace the concept of infrastructure as code (IaC). The idea: Use templates and machine-readable files to build a virtual data center on demand. Deploy to the cloud using automated, predefined templates and consumables that contain the enterprise's security, compliance and deployment opinions. This eliminates human error and enables quick and secure infrastructure deployment. Note that IaC restricts users from employing the cloud provider's console to deploy.

IaC also allows enterprises to apply best practices for software development to infrastructure management. Rather than one-off development of an application-specific infrastructure, the enterprise builds a reusable foundation that can be used for all applications. The enterprise uses tools that provide automation capabilities and create a continuous integration/continuous delivery (CI/CD) pipeline. That pipeline can support a sustainable, on-demand infrastructure that has the built-in security and scalability needed to accelerate enterprise-wide cloud adoption.



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Best practice #2: Select the right workload

Selecting the right first “masthead” application or workload for a cloud journey is vital to igniting change and ensuring buy-in from the organization. This application should possess several important characteristics:

- Contributes to the success of the business in a meaningful way
- Carries both internally and externally recognizable branding
- Includes application and support teams eager to embrace the cloud
- Suffers from scale, cost or agility constraints that cloud computing can help overcome
- Possesses some cloud-native characteristics, along with a relatively low level of technical complexity

During this initial stage, training and documentation development strengthen the foundation for future applications. This measured, iterative approach is key to overcoming the challenges of cloud adoption – many of which stem from a decentralized approach.



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Best practice #3: **Build a center of excellence**

As its cloud journey matures, the enterprise should establish a Cloud Center of Excellence (CCE) that brings together in-house high performers and forward thinkers. Along with the right cloud consulting partner, the CCE will steer cloud efforts throughout the organization, maintain momentum and advocate for adoption. Team members will evaluate workloads for cloud suitability, and become the go-to people to deliver and support the cloud strategy, ensuring an agile, iterative, horizontal capacity.

Communication is key to building momentum for cloud adoption. Support the CCE with a clear communication strategy. This will help build a process and culture that accelerates cloud adoption. Too often, poor communication hampers cloud success – and makes the CCE's work unnecessarily difficult. There's not a single IT problem that cloud technology can't solve. If cloud providers don't already have the solution, they can build it. But communication is important to overcoming the people- and process-based challenges that can derail cloud initiatives.



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Best practice #4: **Start with a cloud foundation that scales**

To ensure compliance, security, governance and operational readiness, turn to (or build) an enterprise-grade foundation that acts as a virtual data center in the cloud. To enable cloud at scale, manage the platform through automation. Also, use the same authentication and security policies as the existing on-premise or hosted data centers. Using the everything-as-code approach described earlier allows for configuration and maintenance automation. This eliminates human involvement – and the risk of human error.

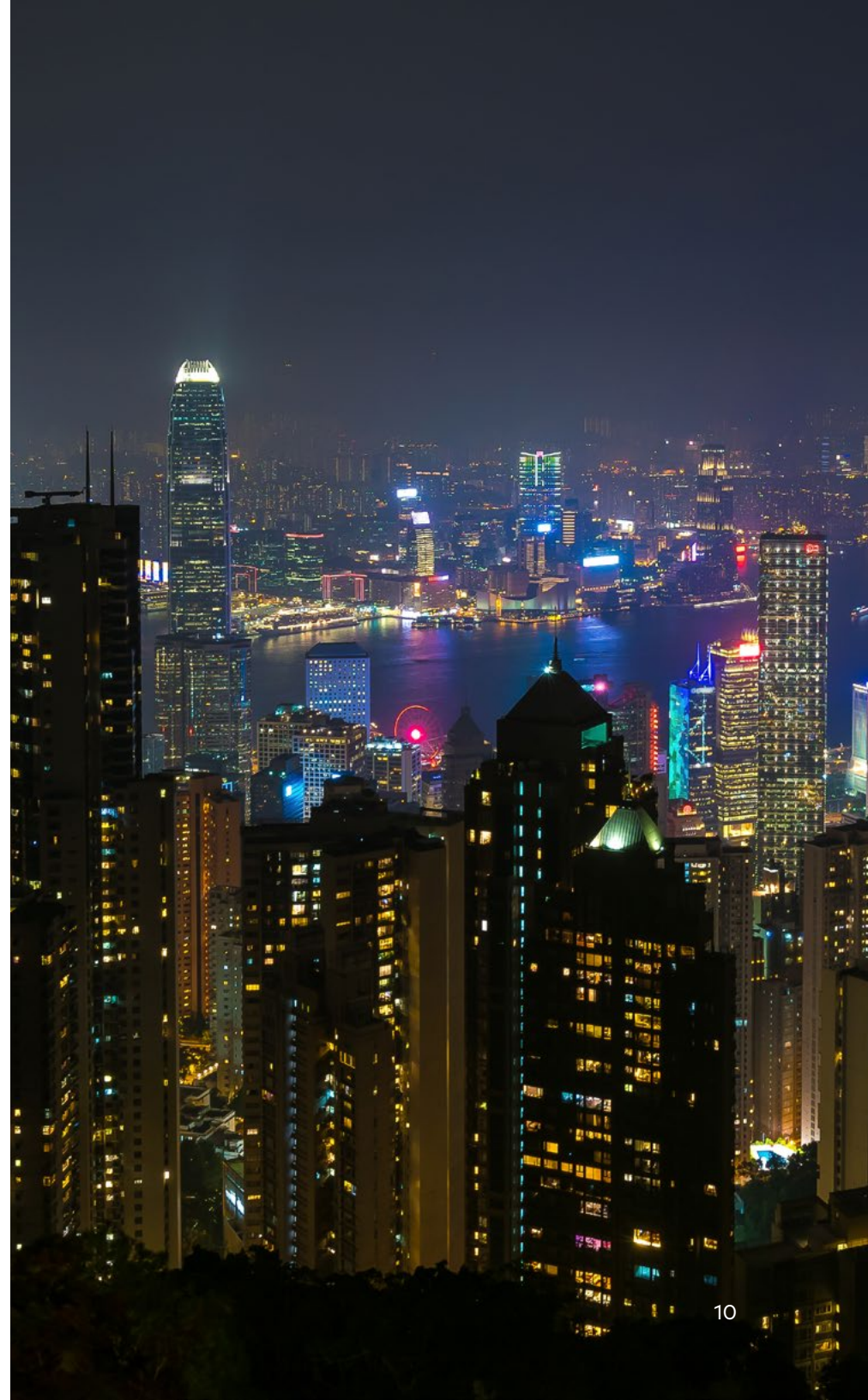
This virtual data center provides a foundation for migrating to the cloud – from a single workload to 10, and from 10 to 100 and beyond. Plan and launch the data center with scale in mind. Success requires that the center's operational capabilities mature and evolve alongside the cloud platform.



Best practice #5: Go faster with the right foundation

Service providers can speed their journey to the cloud by selecting a cloud platform that provides a firm foundation for moving to the public cloud at scale. It should provide:

- **Security:** Look for an architecture already trusted by some of the world's largest and most security-conscious companies
- **Rapid time-to-value:** An effective platform should include enterprise-grade templates that can get you started rapidly
- **Price and time frame:** Highly trained and experienced project managers should help ensure on-time and on-budget delivery
- **Low risk:** A proven approach mitigates the risk of throwaway work, and ensures an enterprise-grade platform that meets security, compliance and agility needs



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An accountable ally for cloud at scale

Today, service providers know they must transform to create the experiences their customers expect. The Amdocs team brings together experience, cloud and culture to accelerate the digital transformation required for success. This united approach empowers service providers to:

- **Reimagine digital experiences:** Create amazing digital experiences to differentiate your services from the competition
- **Adopt cloud at scale:** Faster and more predictable software deployment combines with the elasticity of the cloud to increase performance and resiliency while reducing risk
- **Build a culture of velocity:** Upskilled internal teams use Agile methodologies along with AI and automation to enhance speed and quality

Visit [our website](#) or [contact us](#) to learn how Amdocs can help you adopt cloud and operate on the cloud at scale.

Amdocs helps those who build the future to make it amazing. With our market-leading portfolio of software products and services, we unlock our customers' innovative potential, empowering them to provide next-generation communication and media experiences for both the individual end user and large enterprise customers. Our 28,000 employees around the globe are here to accelerate service providers' migration to the cloud, enable them to differentiate in the 5G era, and digitalize and automate their operations.

Listed on the NASDAQ Global Select Market, Amdocs had revenue of \$4.3 billion in fiscal 2021.

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