



# Optimize and reach higher

Getting the most value from cloud  
means rethinking how you manage  
and optimize IT





# Life is fundamentally different in the cloud

Traditional operating models are eclipsed by a continuous process of management and optimization

Managing a cloud estate can be a culture shock. In the cloud, the traditional mode of operating—centered around buying, running and decommissioning physical hardware over multi-year cycles—goes away, replaced by a need to continuously manage and optimize capacity, consumption, cost, performance, and business innovation.

Continuous optimization is necessary because constant change is one of the defining qualities of cloud. Consider that, every month, the major hyperscalers are pouring billions of dollars into new cloud capabilities for their customers. That means literally thousands of upgrades, releases or new services every year. The pace of change is extraordinary and unlike anything seen in traditional IT. Established “change management” approaches simply can’t keep up.

That’s why cloud needs a very different way of working. Operating models need to be rethought for this much more dynamic and fluid environment. Standardization and automation become much more critical components. New skillsets and mindsets are inevitably required.

Accenture calls this the need to “Run Different”. It’s about shifting to the agile ways of working that will maximize your cost efficiency, enhance your IT performance and deliver on the huge innovation potential of the cloud. .

## The journey to cloud value

- Rethinking how you run and optimize your IT estate is only one component of a successful cloud journey.
- As explained in [Accenture’s Cloud Ascent](#) point of view, achieving maximal value in the cloud has five essential elements in total: migrating quickly and securely; partnering with hyperscalers; modernizing architectures, applications and data; running differently in the cloud; and building a cloud platform for digital transformation, innovation and growth.
- Each element has value on its own, but when brought together in the right way, all five form an extremely powerful strategy for delivering flexible and sustainable operations and future competitive advantage.

# The new paradigm for running IT

Managing IT in the cloud means overhauling how you run and support your estate

## How does the operating model need to change?

Just because you're in the cloud, it doesn't mean the need to manage your IT somehow goes away. Whatever type of cloud environment you opt for, it will still need to be managed well if it is to deliver value for the business. And that, ultimately, is your responsibility, not the cloud provider's.

The exceptional pace of the cloud undeniably brings some additional complexity. A cloud operating model needs to provide agility, scalability, and ease of use, enabling the rapid adoption of new cloud releases and services. At the same time, you still need people who understand the infrastructure and can handle the basics like patching, security hardening, and backups and updates.

A cloud operating model needs to be focused on optimizing the cloud estate. That means optimizing the consumption, and by extension the cost, of workloads. But to truly maximize the value on offer, the enterprise also needs to optimize for application performance and business innovation. So you need to ensure you're leveraging the right mix of cloud services to maximize application performance as well as onboarding innovative new capabilities as they're released to the market. It also means ensuring you're making the most of your data, using cloud services to get new levels of insight.

## What new skills will I need?

Managing a cloud estate calls for a continual reassessment of skillsets and mindsets. You need people who are adaptable and eager to learn about what's new in their field. There are some aspects of cloud that will require greater specialization, while others, such as application development, will require multidisciplinary “full stack” roles potentially covering multiple cloud platforms.

In addition, you need to be prepared for constant and rapid change: skills that appear foundational one day can seem obsolete the next. Consider how much has changed in an activity like provisioning a server. Once, it might have taken six or seven different individuals, using five or so different toolsets, over a process involving 20 different steps.

Now, thanks to infrastructure as code tools like Terraform, it takes a single IT professional just a few steps to complete the whole process—on any cloud platform. In fact, new capabilities are being developed that enable self-service for even novice levels of expertise, bringing even greater flexibility to an operating model.

What's more, it's not just technical skills that change in the cloud. More and more, cloud requires an organization to bundle non-technical skills—design thinking, business strategy, industry-specific skills, to name just a few—into the same operating model.

**However,** finding the right people with the right cloud skills can be a challenge. Nearly all companies are competing heavily for the same top talent. Further, with the dynamic nature of cloud, managing this need for continuous reskilling and rehiring can be a Herculean task. For many, utilizing third-party skills and expertise will be essential.

## How should I use automation?

Automation is a fundamental part of managing a cloud estate. The greater standardization and uniform nature of a cloud environment means you can express the rules and policies you want to enforce through code, leading to a streamlined “as code” environment, including infrastructure provisioning as code, configuration as code, security as code, policy as code, and so on.

**For example,** some have gone as far as creating “reaper bots” to automatically remove non-traditional ways of working. But it can be a highly effective means of changing behavior and culture. The flip side, however, is that, done wrong, automation in areas like storage or network configuration can unintentionally expose corporate data to the outside world. That creates obvious and significant risk, and so a robust enterprise automation approach is essential.

## Experience the magic of cloud automation with myWizard

- Accenture’s myWizard is an integrated delivery-focused platform that applies the best of AI-driven automation and technology assets to secure cloud migration and management. myWizard helps establish and manage the cloud estate, underpinned by a vast array of intelligent automation and AI-infused assets.
- Accenture helped a large APAC based telecom deliver an enhanced customer experience by implementing myWizard AIOps platform. myWizard supplied predictive, proactive and reactive monitoring solutions coupled with intelligent alerting and AI based self-heal measures to avoid business disruptions. The enhanced automation helped reduce manual order interventions by 35 percent, improved the telecom’s Net Promoter Score by 10 percent, increased productivity, and enabled the business to cut costs by more than \$7 million.



## How can I enforce governance through code?

Automation provides critical guardrails for your business, transposing into digital rules much of the tacit knowledge that otherwise only exists in your best engineers' heads. That's important because cloud can be so deceptively simple. When anyone with a credit card and some rudimentary knowledge can create an account and set up an environment, the risk of uncontrolled cloud sprawl—and cost—is obvious.

By expressing governance in code, the enterprise can significantly reduce its exposure to risk. Admittedly, this is much easier to achieve in a greenfield cloud environment. Trying to build new guardrails in a complex brownfield environment that was lifted and shifted from a data center risks breaking as many controls as you create. It will often therefore make sense to build your governance into greenfield cloud native environments and then incentivize the organization to switch across (whether through reduced chargeback or other means).

## Who's responsible for security?

The huge investments being made by the cloud hyperscalers mean your organization can benefit from a level of security in the cloud you simply couldn't match in your data center. But the hyperscalers can only do so much: the security of the data and applications you put onto their clouds is ultimately still your responsibility.

So that security needs to be managed. Visibility, auditability and constant vigilance are essential. You need to be both reactive and proactive in managing the security threats, across all the various IaaS, PaaS and network components of your cloud estate.

The good news is that cloud can significantly improve your security posture. The hyperscalers provide a range of tools and capabilities to help monitor, report on, and harden security. This is also another area where the pace of change means a managed service should be considered, enabling DevSecOps best practices to be applied right across infrastructure provisioning and the application development lifecycle.

**For example,** Accenture helped a large mining company embark on an ambitious journey to digitize its operations. With many of its core business systems nearing their end of life, the time was right to move to cloud. The work required a multitude of skill sets, including security, with Accenture taking responsibility for almost all aspects of the implementation and management of the cloud estate. Accenture was able to assess security risks as workloads were migrated and onboarded. In doing so, we discovered thousands of open vulnerabilities within the company's infrastructure, which were remediated quickly—within two months. Today, the company's cloud environment is running securely and is continually being optimized to maximize performance.



# Optimize and aim for the skies

Take your cloud estate to new heights through a process of ongoing optimization and evolution

Getting value in the cloud is all about optimization. But it's more than a question of cost. You need to optimize for performance and innovation as well as consumption.

## Optimize for innovation

The innovation potential of the cloud can transform your IT organization's way of working from a reactive approach—receiving and responding to requests from the business—to something much more proactive and forward thinking. When it can track, assess and understand the torrent of new hyperscaler services and capabilities, IT isn't only better able to optimize the cloud estate— it can also push innovation towards the business as an active participant in the company's growth agenda.

However, the rate of change and sheer volume of new releases means discerning the signal from the noise is a real challenge. There simply isn't time to kick the tires on every new release, evaluate its innovation potential and assess its suitability for your business. There are few organizations in the world with enough resources to do that systematically.

This is another strong reason for seeking partnership and expertise from outside the organization or creating a Cloud Center of Excellence **(see page 11)**.



# Create an innovation beacon for your organization

A Cloud Center of Excellence (CoE) can significantly accelerate cloud adoption and value. By bringing together both technical and business expertise, the COE brings central governance and direction to cloud decision making and the process of optimizing for innovation.

The CoE can play a crucial “marketing” function in pushing the enterprise innovation agenda forward. With a small and dedicated team of architects monitoring and assessing the potential of each cloud release, the enterprise is better placed to stay on top of the multitude of new cloud services.

**However**, it’s important that the CoE is grounded in the day-to-day realities and challenges that application teams face, and doesn’t fall into the trap of becoming an “ivory tower” disconnected from the real needs of the business.

Accenture has extensive experience of working with clients to establish highly effective and integrated cloud CoEs. We can put expert architects on the ground as trusted advisors, introducing new machine learning capabilities to identify relevant releases, and providing a central point of expertise and best practice for new cloud services, while helping the client build up its own skills and capabilities over time.





## Optimize for consumption, cost and performance

Perhaps the biggest cultural shift in the cloud is the need to continuously monitor, manage and optimize the consumption, cost, and performance of cloud resources. You need to be constantly on your toes, able to see when spikes in compute happen, understand what applications are involved, and take proactive mitigating steps to optimize your costs and performance.

This is an extensive and valuable undertaking if done right. It means having the right people with the right skills to understand the complex interplay of cloud consumption and business processes. It means continuously monitoring the full stack, from the macro business level (balancing consumption against optimal user experience) right down to the micro technical level (how data packets are moving across your network)— and everything in between.

Intelligent technologies can help. Machine learning can be used to predict how an application's compute needs change over time with user behavior. You're then much better placed to predict spikes, optimize your consumption, find the right balance between reserved and dynamic cloud instances, and make smart use of the spot market, containers, or serverless autoscaling to gain extra capacity when needed.

## Change behaviors with FinOps transparency

Optimizing cloud is a cultural issue as much as anything else. Consider the risks posed by forgotten or abandoned workloads. When they spin up a new environment for troubleshooting, experimentation, etc., developers won't always be thinking about the implications of leaving those workloads behind afterwards. In the past, this didn't matter so much. But in the cloud, it's a real problem. You can easily rack up consumption and cost at an alarming rate.

FinOps—the financial management of cloud—is a highly effective way of changing behavior and changing culture. By building financial transparency and accountability into your cloud operating model via a chargeback mechanism, you expose the true financial cost of cloud to each relevant part of your organization.

This transparency is vital in optimizing the use of cloud. When individual application teams take responsibility for their own cloud usage and cloud costs, they're highly incentivized to minimize them. The whole organization is then better aligned around the total cost of ownership of the cloud estate.

For IT, this is a very different way of operating. It means evolving from a purely technical relationship with the rest of the organization to one that also includes business and financial considerations, including cost saving tactics that require an understanding of contract terms. And it can be complex. A single monthly bill might have millions or billions of line items, each needing to be allocated for chargeback. This is a further area where some combination of managed services and/or machine learning powered tools should be seriously considered.

# Managing beyond the cloud



From data to networking to edge computing, cloud opens up new horizons for managing other parts of your business

For most organizations, cloud infrastructure is only one part of the technology estate. There are many other related components that need to be managed and optimized alongside.

**Data.** The sheer amount of data enterprises end up with in the cloud—in some cases many exabytes in volume—creates what’s known as “data gravity”. Put simply, when your data gets too big you can’t just pick it up and move it someplace else. So cloud data management needs to consider factors like bringing compute to the data, or creating smart extracts that can be moved more easily.

**Edge.** As more and more compute is pushed from cloud to minimize latency and maximize compute performance at the network edge, enterprises need to consider how to manage the interplay of the two, and where the data fits in.

**Networking.** This is an area where cloud providers are rapidly expanding their services. Each has literally dozens of network services including routing, switching, and more.

**Machine learning.** Enterprises can now benefit from numerous ready-made machine learning services from cloud providers, providing advanced insights in areas like customer segmentation, supply chain optimization, and more.

The key point is that cloud is interdependent with all these activities (and much else besides). Cloud management and optimization needs to consider how the whole operating model fits together.





# Time to run different in the cloud

As cloud adoption continues to accelerate across all industries, we're witnessing nothing short of a complete re-platforming of global business. Accenture views this as the pivotal moment of the digital era, where a robust cloud agenda shifts from a future aspiration to an urgent mandate.

To deliver value, this acceleration of cloud needs to be managed effectively. The pace of change is such that you can't wait for the end of your five-year hardware lifecycles or managed services contracts to reconfigure how you operate. Optimization and intelligent cloud management needs to happen all the time and needs to start now.

This is why many companies choose to work with third parties for their cloud management and optimization needs. These organizations have the scale necessary to keep on top of the vast range of new cloud services released every month, plus the expertise to slipstream those releases into the enterprise estate with minimal disruption. In fact, Accenture research shows that 48 percent of those using third-party managed services "to a great degree" report achieving the full benefits of cloud (compared with just 35 percent of those that don't).<sup>1</sup>

**The key message?** Build optimization, innovation, and the adoption of new cloud capabilities into your day-to-day run operations. That's the central paradigm shift of running differently in the cloud.

1. Sky High Hopes: Navigating the Barriers to Maximizing Cloud Value

## About Accenture

Accenture is a leading global professional services company, providing a broad range of services and solutions in strategy, consulting, digital, technology and operations. Combining unmatched experience and specialized skills across more than 40 industries and all business functions—underpinned by the world’s largest delivery network—Accenture works at the intersection of business and technology to help clients improve their performance and create sustainable value for their stakeholders. With 505,000 people serving clients in more than 120 countries, Accenture drives innovation to improve the way the world works and lives.

Visit us at [www.accenture.com](http://www.accenture.com)

## About Accenture Research

Accenture Research shapes trends and creates data driven insights about the most pressing issues global organizations face. Combining the power of innovative research techniques with a deep understanding of our clients’ industries, our team of 300 researchers and analysts spans 20 countries and publishes hundreds of reports, articles and points of view every year. Our thought-provoking research—supported by proprietary data and partnerships with leading organizations, such as MIT and Harvard—guides our innovations and allows us to transform theories and fresh ideas into real-world solutions for our clients.

For more information, visit [www.accenture.com/research](http://www.accenture.com/research)