Capgemini

IN CLOUD OPERATIONS, AGILITY & ADAPTABILITY MAKE THE DIFFERENCE

SUPPORTING THE ADAPTIVE ENTERPRISE

Today's modern enterprises are digitizing their products, processes, and services at an accelerated speed to be competitive and create new disruptive business models. Enterprises are attempting to shift from being slow and difficult to change to being able to adapt quickly and effortlessly – responding to market changes or shaping new revenue opportunities. Traditional IT models and technologies are being forced to change in order to match the pace of the modern enterprise. In this digital age, businesses rely on software and its seamless delivery to create engaging digital experiences for their customers, employees, agents, and partners. Resiliency, sustainability, doing more with less, and shaping the IT organization around new customer experiences and ways to engage are but a few of the trends we are already seeing from our customers and the industry, and expect them to continue in the coming years.

Cloud creates a paradigm shift for IT, providing on-demand access to a set of rich capabilities that enable scale, agility, and new levels of operational efficiency through the ability to automate and streamline IT delivery. Adapting IT operations to this new world is challenging for organizations, and there are several influencing factors that are shaping what an adaptable, cloud-enabled IT operations should look like.

THE RISE OF MULTI-HYBRID-EDGE

Today, 87% of large enterprises are leveraging a multi-cloud strategy within their IT operations. There are many reasons a multi-cloud strategy makes sense – compliance requirements that mandate certain business processes cannot run in the cloud, or latency requirements such as running compute as close to data as possible, as is the case with Edge devices within a retail store or an oil rig.

Regardless, ensuring governance, data security, standardization, and visibility across disparate cloud eco-systems is a challenge when all these cloud platforms use different control planes, traverse multiple private and public networks, sovereignties, and suppliers.

CONSTANTLY EVOLVING ECO-SYSTEMS

Each of the top 3 cloud providers (AWS, Azure, and GCP) has over 200+ fully featured services, with hundreds of thousands of sub-component manipulations, allowing customers to ideate, test, deploy, and operate a multitude of powerful business use-cases. AWS alone updates its products multiple times a month – keeping customers abreast of the latest innovation and industry-leading capabilities. But this creates challenges for IT when they must quickly learn how to automate, govern/secure, integrate, and operate these features into their service without slowing down the rest of the business and creating an unforeseen internal culture of shadow-IT.

REDUCING TCO AND OPTIMIZING WASTE

Cloud offers unique consumption models, providing on-demand access to compute, storage, and network resources with a variety of optimization levers that can help businesses fine tune their cloud bills. In principle this is extremely beneficial commercially, in practice it is a technical and cultural challenge to implement correctly.

The average cloud bill for a large enterprise is over $12million per year, and a recent survey indicated that nearly 28% of cloud spend is considered waste. Uncontrolled waste leads to rising costs and carbon footprint – damaging business cases and future innovation. FinOps, and emerging practices in GreenOps, help embed the right financial and carbon accountability and governance into IT and the business – but these are difficult to staff, require specialized tools and, more importantly, require a culture shift to be sustainable at scale.

DELIVERING VALUE, FASTER

Businesses are trying to get closer and closer to their customers, focusing on the buyer and their current and future needs, and meeting those needs extremely quickly. We are seeing a significant rise in the number of organizations transforming to product-centric delivery to operate like a digital startup and deliver more innovation with quicker feedback loops. This requires IT to be engaged across multiple lines of business, aligned to value streams, customer experiences or journeys, and the measured goals of these business units.

IT must become a value enabler, adopting new ways of working to support velocity (DevSecOps/ Agile) and embedding a product-based culture and delivery model into their organization – ensuring that the platforms they build are the platforms their internal customers want and can use at scale and at speed. Developers are king in today's digital businesses, creating the value and differentiation to make or break industries – helping them to do things faster, without getting in the way, is now becoming the key priority for IT operations.

WHAT DOES AN ADAPTABLE CLOUD OPERATIONS LOOK LIKE?

There is no single pattern for what good looks like in cloud operations. Every organization is on their own journey, at their own pace, and with their own unique requirements. One of the primary benefits of cloud computing is its ability to enable adaptability in business models and for technology to no longer be the handicap of innovation. Creating an adaptable cloud operations model that can pivot to new business needs quickly, leverage cloud innovation securely, and streamline IT delivery efficiently should be your priorities.

There are some key principles we recommend to organizations looking to create an adaptable cloud operations model.

Become Business Engaged

Engage with stakeholders outside of IT to educate and empower developer/feature teams to leverage cloud platforms in the right way to build value, not cost. Build these skills into your cloud operations teams and adopt an operating model that supports continuous innovation.

Abstract Complexity

Create cloud abstraction and orchestration to eliminate silos and complexities across multiple different cloud eco-systems, standardizing automation approaches to deliver a unified cloud experience.

Support Scale@Speed

Move away from the anti-pattern of lots of small cross-functional teams working in siloes to a centralized self-service platform strategy and dedicated platform teams with an agile-first approach.

Enable Security & Governance-as-Code

Combine platform automation, policy as code, and developer-driven compliance embedded in self-service workflows and building blocks to enable continuous compliance and maintain strict security standards across all cloud infrastructure and platforms.

Enable Frictionless Infrastructure

Remove friction in developer workflows by enabling API driven, self-service infrastructure platforms to deliver customer value faster while improving productivity and reducing risk. Depending on organizational maturity, consider a flexible governance model that enables cloud consumers to provision and change cloud infrastructure directly via APIs or via pre-built service catalogs designed around business use-cases – providing the right blend of agility vs. control.

Reach for NoOps, even though you might not get there

A completely automated IT environment that requires absolutely no human involvement is on paper an extremely attractive proposition. The reality is that a NoOps target fits well into use-cases where all applications are built using cloud native architectures and services, but all large enterprises have monolithic, legacy applications where it is simply not possible to automate all software development, deployment and maintenance processes. Instead, organizations must embark on a journey, automating as much as they can and embracing practices such as DevSecOps and SRE that encourage people, teams and business units to collaborate more effectively when building and operating infrastructure and applications.

Become Cloud Native

Adopt as many hyperscaler native services into your platforms as possible. Not all are suitable, but by taking this approach you can reap the benefits of the enormous investments, and thus innovation, from the cloud providers. Fill in the gaps in cloud provider features by considering the well-established open source and ISV communities, but most importantly, focus on your consumers to understand their tooling needs so that what you are building is what they want to use.

Embed FinOps and GreenOps

FinOps has come a long way in the last decade, with the formation of well-established practices and tools that can help bring visibility, accountability, and control to cloud spend. It is easy to get quick wins and identify savings with foundational FinOps approaches, but it is much harder to make this an ongoing practice within the business. GreenOps for cloud is still very nascent as a cultural shift within IT is required to align business goals and ESG (Environmental, Social, & Governance) ambitions and there is a myriad of dysfunctional tools that rely on aged, stale data to present only a subset of actual carbon emissions data. However, begin establishing the basics through sustainable, well-architected platforms and begin to experiment with tools in the market that fit your unique infrastructure and ESG needs.

CONCLUSION

In the future, IT operations will undoubtedly face new architecture paradigms to overcome, new technologies to onboard, and/or urgent business priorities to deliver. Building adaptability into your architecture and operating model is critical to the success of evolving digital business models of the future.

To help overcome these challenges for customers, Capgemini has developed Adaptive Cloud Operations (ACO) – a modern approach to operating in the cloud, providing an adaptable, modern framework of cloud-native tools, managed services, and expertise to ensure the reliability, optimization, and security of applications across a variety of use-cases.

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