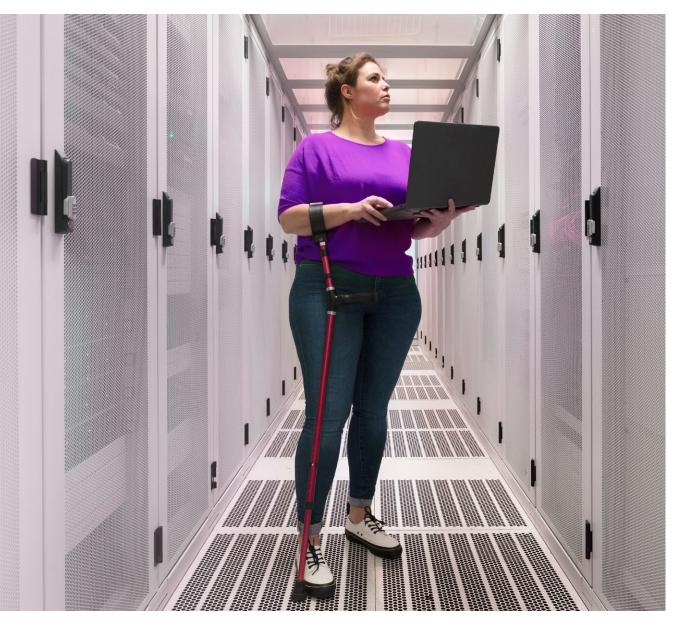
## Many clouds, one strategy

How to unlock innovation in hybrid cloud environments









- In most cases, public cloud alone isn't enough.
   Companies will continue to rely on private cloud and traditional IT to meet certain business needs.
- Hybrid, multi-cloud architectures are often the only option, but they are complex to set up and operate.
- To manage hybrid architectures, companies need the right strategy, the right operating model, the right talent, the right tools, and the transformation roadmap to get there.

# There's no one-size-fits-all public cloud

A few short years ago, many companies looked to public cloud as a solution to their business needs. However, as they progressed on their cloud journey, they often find that additional components are required.



While most industry observers anticipate that organizations will still move the majority of applications and workloads that can be virtualized to public cloud (with public cloud representing up to 80% of companies' infrastructure footprints) most enterprises have pivoted to a hybrid approach in response to the need for a more balanced approach, moreover it is expected that more than 90% of organizations will opt for multi-cloud architectures to avoid over-reliance on a single public-cloud provider.

Most enterprises have pivoted to a hybrid approach in response to the need for a more balanced approach

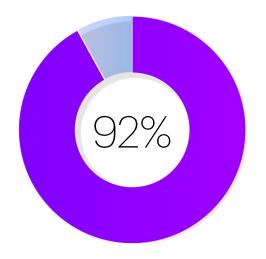


Figure 1

Percent of companies following
a multi-cloud strategy with at least
two Hyperscalers at strategic partners.<sup>1</sup>

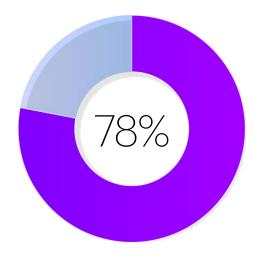


Figure 2
Percent of organizations
utilizing hybrid cloud models
(public and private).<sup>2</sup>

<sup>&</sup>lt;sup>1</sup> Flexera State of the Cloud Report, 2021

<sup>&</sup>lt;sup>2</sup> Ibid.

## It has become increasingly clear that public cloud isn't suitable for all workloads. It's limited by:

- Commercial challenges (e.g., licensing models that make it uneconomical to migrate entirely to a hyperscaler)
- Technical challenges, such as latency and performance for very specific workloads
- Data Gravity/Data Velocity/Data Size in some special intensive use cases
- Sovereignty/regulatory constraints regarding where data is stored
- Edge deployment scenarios which require decentralized infrastructure
- And in some cases, business continuity requirements

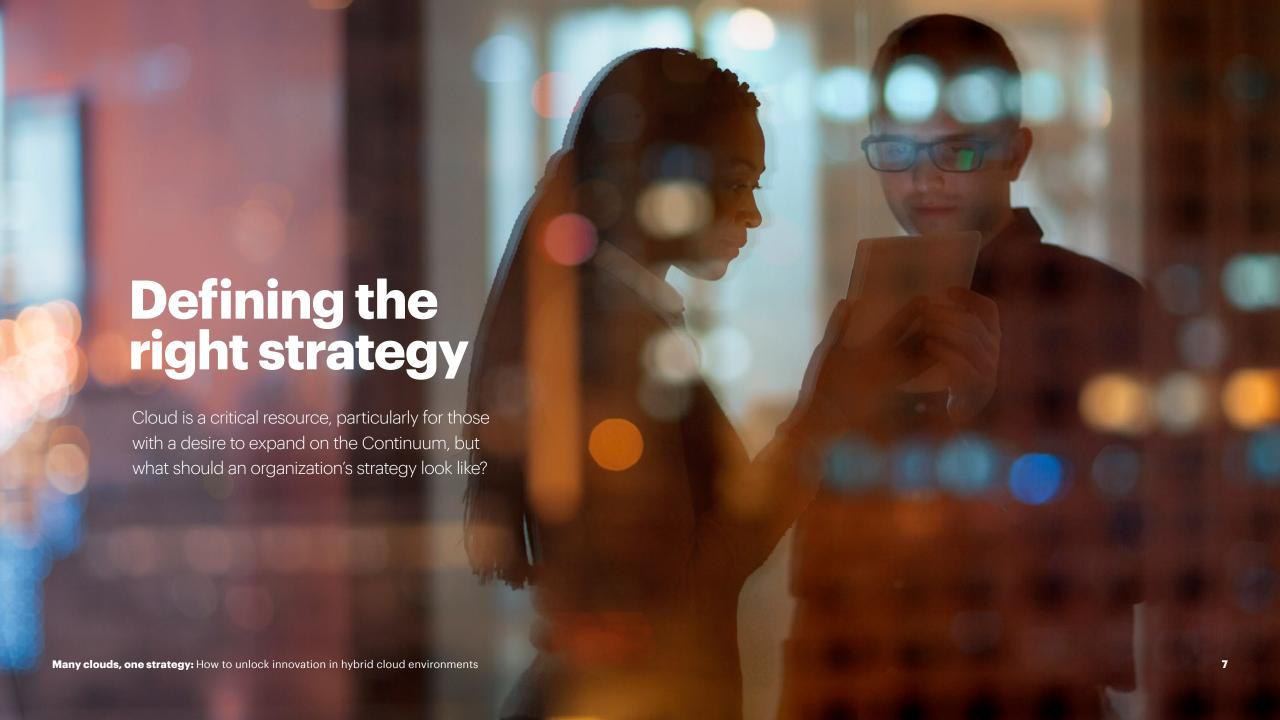
Consequently, hybrid cloud models are often required to meet the full scope of business requirements. For example, organizations may look to private cloud or even an on-prem data center to address regulatory/compliance requirements.

Recent market trends reflect this perspective. The boundaries between public and private cloud are blurring as the world of cloud evolves. The hyperscalers have moved into the private-cloud market, and established hardware manufacturers are launching public-like consumption offerings. At the same time, hyperscalers, telcos and others are pushing edge computing, which is set to grow exponentially over the next five years. In fact, cloud has evolved into a dynamic continuum of capabilities—from public through edge and everything in between and a number of organizations are leading the way by using the cloud not just as a single, static destination, but as a future operating model. Hybrid models are well positioned to support operations in and workload migrations through the Cloud Continuum.

### What does all of this mean for enterprises? It boils down to two key realizations:

- 1. For most organizations, hybrid architectures are the only viable option.
- 2. Companies need a holistic strategy that embraces the new hybrid Cloud Continuum, spanning public cloud, private cloud and edge computing.





### There are a variety of considerations to take into account to get it right:

- A vision that clearly states the business objectives, desired innovations and future aspirations as well as identifying competitive vulnerabilities.
- A cloud strategy which has a systematic framework for delivering and measuring business value now and in the future.
- A clear classification of capabilities, today and in the future, while building in enough flexibility to adapt over time.
- A well-considered roadmap for the cloud journey that balances speed and value and supports the overall business strategy and ambition.

Defining a cloud strategy involves carefully balancing diverse business demands. Hybrid architectures are a great way to satisfy business needs across all parts of the organization while unlocking innovation.





To cater for all business requirements, hybrid architectures are complex.

To set one up, organizations need to find the right combination of cloud services to meet their diverse business and technological needs.

How are you going to manage the different technology platforms? How much will that cost? What's the right operating model? How are you going to find the right talent? How will you set up disaster recovery? In a hybrid world, the answers to all of these questions need to be considered holistically. Purposeful hybrid architectures are more difficult to architect, design, build, set up, test and operate than people had expected.

This is partly because the scope of cloud is expanding rapidly, for example, an integrated role-based access control across clouds and on-premises becomes the norm. Before, it was a case of discrete islands: each company had a data center and a cloud environment. It was pretty straightforward. Now, cloud has become a continuum that offers numerous new opportunities across an increasingly distributed IT landscape. Many organizations use a centralized cloud, a data center, a colocation facility, campus areas, plus some data and compute resources at the edge. It's a spectrum of environments which, once integrated, add to a truly hybrid estate.



## **Putting it into action**

Defining the right infrastructure strategy to meet business needs and manage complexity can be accomplished by focusing on five key steps:

01

Selecting the right "landing zones" for applications and data

02

Defining the optimal hybrid architecture

23

Setup a Continuum
Control Plane
to manage and
optimize all
environments

04

Defining the right roadmap and sequence of migrations

05

Planning for continuous innovation



Once companies have clearly established the business priorities that will drive their cloud strategy, the next step is working out the architecture needed to support it. We've established a set of criteria to help organizations define the right target environments and then select the appropriate target for each of their applications—referred to as "landing zones".

A landing zone is a client-specific configuration within a cloud, which can be optimized for different purposes (like license cost of a database or usability for developers). Through this process, we look at each company's unique business needs and constraints including legacy apps, industry standards and regulatory requirements.

The sweet spot? Keeping the cloud landing zone strategy as simple as possible, while ensuring all business needs are met. It's important to recognize that landing zones will continue evolving over time.

What does this mean in practice? A company's three-year target architecture may look different from its six-year target. For example, companies with large legacy ERP environments that need replacing know that it will take time. So, the legacy apps may be in three-year target architecture, but not in the six-year one. Another example: some companies have business-critical systems sitting on mainframes. They need to take time carefully planning that migration (or even better modernization) to avoid disruption.





To define an optimal hybrid architecture means integrating landing zones from one or more public cloud providers, private cloud data centers, co-located data centers and edge computing zones.

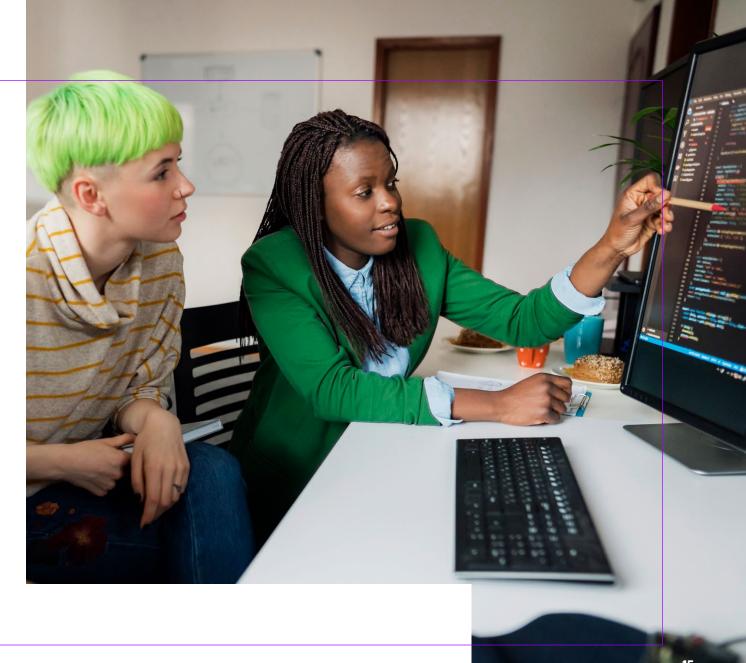


### This integration should be done on three levels:

- **First, technology.** This means developing an integration layer across all landing zones.
- **Second, processes.** This means aligning and integrating processes e.g., the harmonization of provisioning and monitoring.
- **Third, people.** The skills needed to engineer, operate and optimize must be made available—either developed or acquired—and brought together across the whole of the enterprise.

Integrating across these three areas enable companies to dynamically optimize price, performance, and business requirements to meet strategic business goals.

Working with an experienced partner can often accelerate this effort by leveraging their library of hybrid cloud blueprints. For example, Accenture has developed a vast collection of detailed architectures, technical designs and hundreds of automation and configuration scripts supporting both change areas: technology and process. These blueprints help jumpstart mapping of workloads to landing zones and navigate complex environments with confidence.



# Creating a Continuum Control Plane

Once companies have identified the appropriate landing zones and planned the integrated architecture to meet those requirements, next comes another key strategic decision: Creating a control plane to manage the hybrid multi-cloud architecture.



Each environment comes with its own set of management tools but using all the different ones probably isn't a great idea. It's easy to end up with IT management siloes that can make it much harder to control cost, performance and availability.

Instead, companies should look for a Continuum Control Plane that can help them manage their full set of landing zones and beyond into the Continuum. A Continuum Control Plane is a holistic approach, meaning tool stack and processes, to managing the cloud continuum, orchestrating change and driving innovation. It allows developers and operators to automate common tasks and workflows, at scale, regardless of location, by bringing together new processes and a better integrated set of tools, enabled through new platforms and automation.

A Continuum Control Plane helps organizations embrace new practices and operating models—giving them the means and discipline to rapidly innovate and support a culture of continuous reinvention across the Cloud Continuum. It enables organizations to balance their need for operational and financial stability with their need for rapid innovation and agility. The control plane address both requirements. It embraces automation and self-service to holistically secure, operate and govern a hybrid, multi-cloud estate (stabilize) and to optimize and continuously harness innovation across multiple private and public cloud providers (agility).



# Defining the right roadmap and sequence

Next up? Deciding how to organize the migration to the optimized landing zones. Considering multiple landing zones, which evolve over time, multiple steps may be required on a long-term plan for an application.





# Planning for continuous innovation

### Your business doesn't stand still. Neither should your IT.

Once companies have reached their target state, they can continuously harness new innovations from multiple private- and public-cloud providers. This means constantly re-engineering infrastructure to maintain alignment to the business as strategic goals shift and new technologies are introduced to the estate.

With this said, a "target state" is not defined by a technology stack, but by the resilience of your processes and the adaptiveness of your people to continuously evolve within the Cloud Continuum. With a Continuum Control Plane you build a solid foundation for this evolution without having to reengineer time and again, when a new cloud service comes along.

```
#selection at the end -add back the deselected mirror modif
mirror ob.select= 1
bpy.context.scene.objects.active = modifier ob
print("Selected" + str(modifier ob)) # modifier ob is the active of
```

## Embracing hybrid as the path forward

More and more organizations are recognizing that hybrid architectures are the right option to meet their diverse business needs today and tomorrow. So, the question becomes not whether to use a hybrid architecture, but how to consciously build and successfully manage one.

By nature, hybrid architectures are complex. It's vital to keep them as simple as possible, and plan how to manage complexity rather than neglecting it exists. This will keep the business secure, lean and agile.



### **About the author**



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Michael has extensive experience on cloud and infrastructure transformations across the full Cloud Continuum and is part of the global leadership team.

### **References**

1 Flexera State of the Cloud Report, 2021. https://info.flexera.com/CM-REPORT-State-of-the-Cloud

2 Ibid.

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