DELLTechnologies

Your guide to Hybrid Cloud

Brought to you by Australia's most recommended Hybrid IT solution provider

macquariecloudservices.com

Table of
Contents

Preface

Macquarie Cloud Services Hybrid Cloud hosting solution offers flexibility and scalability for businesses across Australia. We specialise in delivering Private Cloud, Public Cloud, Colocation, and managed dedicated servers.

This eGuide will give you insights into Hybrid Cloud considerations and blends, based on real-world experience by Australia's most recommended cloud provider, Macquarie Cloud Services. Whether you're still planning your cloud migration and unsure of which blend suits your business requirements, or ready to implement your cloud strategy, this eGuide, co-published by Macquarie Cloud Services and Dell Technologies, will help you evaluate how best to undertake your journey, at scale.

Find the right cloud for you.

No two businesses are the same.

With the world rapidly changing, custom cloud requirements tailored to your business become critical. Now more than ever, businesses are leveraging a blend of Private and Public Cloud to be more scalable, available and secure.

What is Hybrid Cloud?

On-Premise · Cloud · Dedicated · Colo · Public Cloud

Different applications and workloads have different needs. With mission-critical or sensitive workloads, the ability to easily adapt while maintaining security, increasing performance, and maximising efficiency is key. Determining where to run your workloads – whether on-premises, in the Public Cloud, Private Cloud or all-of-the-above - is a key challenge for every IT department. With many considerations and unique requirements there's never a one-size-fits-all solution. The answer, is combining clouds, we call this Hybrid Cloud.

With capabilities to help organisations across industries to blend on-premises, Private and Public Cloud capabilities, Hybrid Cloud enables businesses to share data and migrate applications between different clouds.

Adopting a Hybrid Cloud approach, IT teams are becoming more agile and efficient as they manage through dynamic business needs.

When you've spent time and money setting up your servers, it's comforting to know that there are solutions out there that allow you to leverage your existing set up. We're here to show that making your cloud more scalable or resilient doesn't have to be complex.

Using Hybrid Cloud services approach means adopting the capability to blending on-premise, Public Cloud, Private Cloud, dedicated hosting and Colocation (CoLo).

We understand that every WORKLOAD is different, and so is every CLOUD.

Macquarie's Hybrid Cloud is fully customisable, flexible with a defined migration path.

We provide various bespoke solutions and Hybrid IT combinations to fit your needs. So, no matter your cloud needs, we keep it simple and deliver Hybrid Cloud solutions that make you smile.

Hybrid Cloud in Australia

In Australia, Hybrid Cloud is has emerged as the new catalyst to accelerate businesses while bringing in more innovative and dynamic ways of working, particularly within the current climate and the rise of remote working.

Despite this upward surge in the adoption, many businesses still grapple with workload and availability challenges.
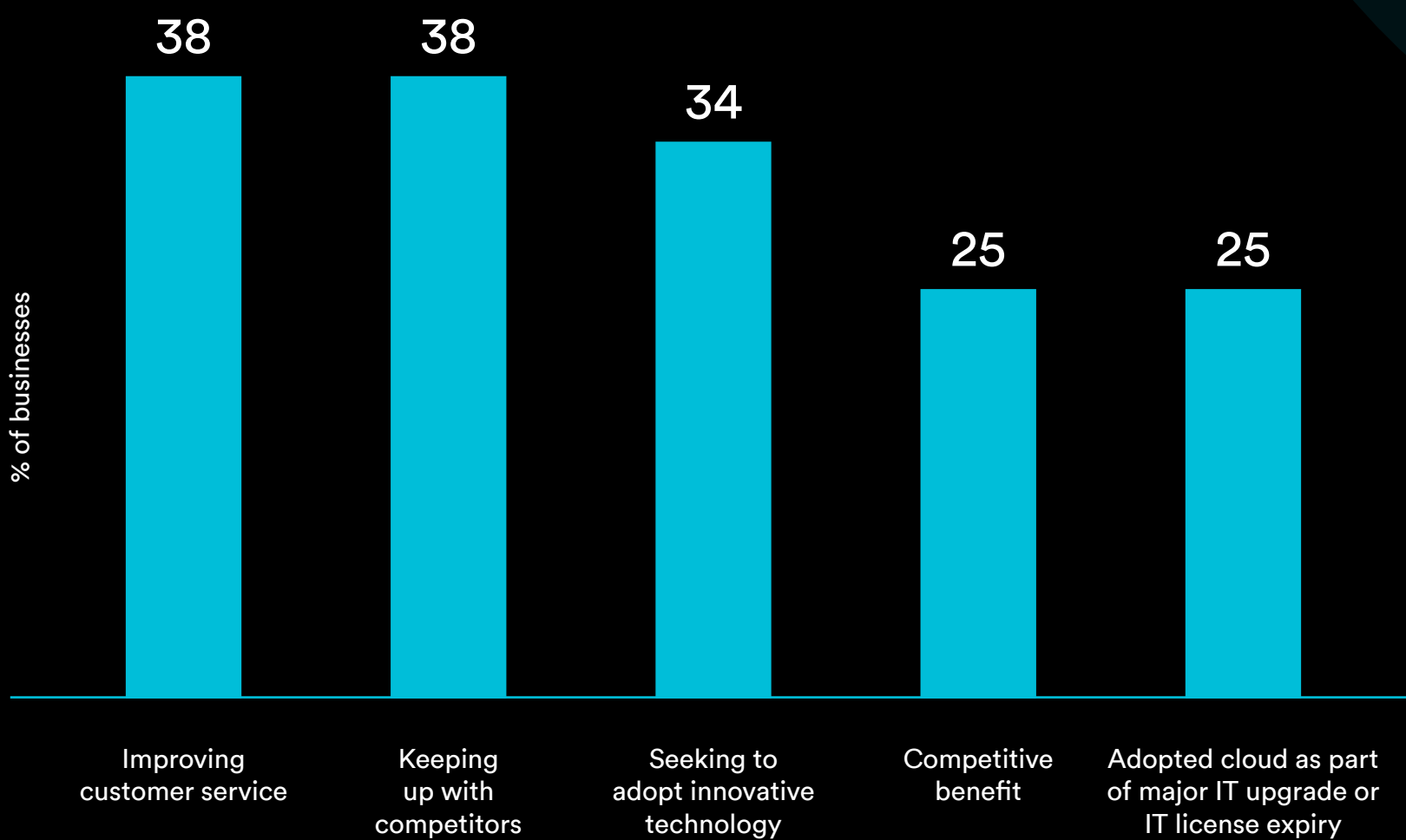
Trends in enterprise adoption of cloud services include building new applications, migrating existing applications, and moving business-critical applications.

The growth of Hybrid Cloud adoption in Australia is undeniable with IT services revenue forecast to grow from **$20 billion** during **2019** to **$24 billion** by **2023**[1].

Adoption of cloud services by forward-thinking businesses are being driven by different objectives, ranging from enhancing customer experiences to staying competitive in today's ever-evolving market dynamics. According to 'Australian Cloud Market Study 2019', more than 77% of Australian organisations have adopted more than one cloud platform. And the next big users of cloud services are the education sector, legal services and finance and accounting industries. Hybrid Cloud will also enhance the way technology is consumed and eradicate data constraints, enabling businesses to spearhead the data economy.

Business drivers of cloud services adoption

% of businesses

Improving customer service	Keeping up with competitors	Seeking to adopt innovative technology	Competitive benefit	Adopted cloud as part of major IT upgrade or IT license expiry
38	38	34	25	25

Source: Deloitte Access Economics and Research NOW, 2018

Private, Public or Hybrid?

Why consider Hybrid Cloud?

- Flexibility – the flexibility and scalability afforded by IT to scale up or down workloads are much greater than managing in-house. In this uncertain climate where workloads can change quickly, having an agile cloud platform is advantageous.

- Lower costs – lower capital expenses and labour costs by utilising a cloud providers data centre.

A cloud tailored to your business need.

Home-grown experts in Secure, Hybrid Cloud

- Providing Hybrid Cloud solutions to organisations across multiple sectors throughout Australia

- Seamless migrations with over 120+ NV1 cleared Australian-based experts

- Hosting mission critical applications for mid-size Australian businesses (18 years)

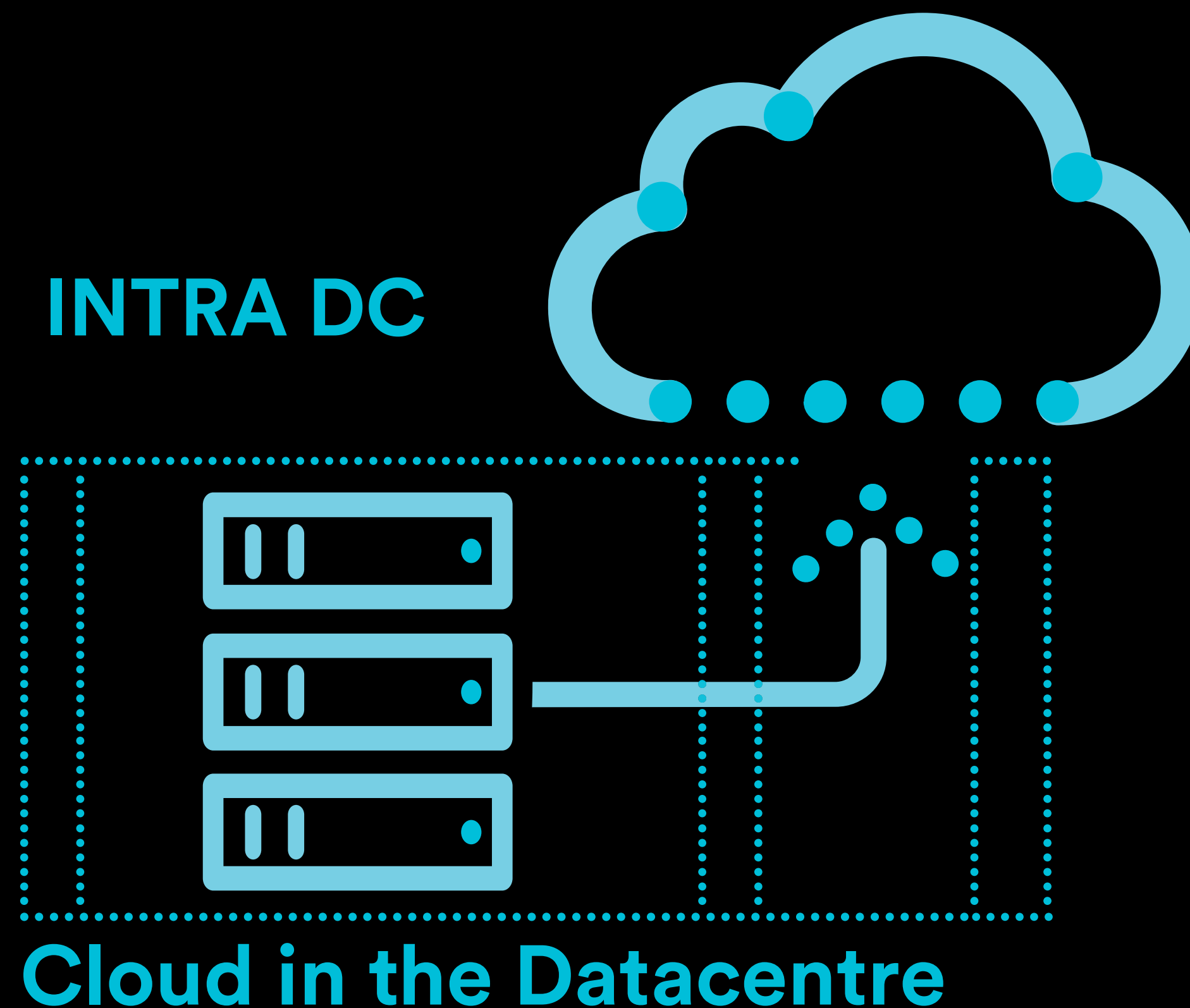- Trused by 42% of Federal Government Agencies.

Hybrid Cloud Blends

Hybrid Cloud isn't necessarily only a mix of Public and Private Cloud. We'll explore some 'blends' of Hybrid Cloud with real business benefit.

1. Avoiding CAPEX by blending Colocation and IaaS

The upside of do-it-yourself (DIY) Private Cloud is predictability and low cost.

INTRA DC

Cloud in the Datacentre

The problem!

DIY Private Cloud doesn't account for the potential issue of sudden capacity requirements.

These are often impossible to predict, require urgent attention from administrators and management, and can negatively impact in-flight projects.

What if you could simply extend your own infrastructure logically, for a variable amount of time, for the capacity you need now without re-inventing the wheel? Whilst that sounds like an ideal solution, the main challenge when extending out to a native cloud provider is - network.

What may start as a complementary volume to supplement your existing capacity can, replace your entire stack. At Macquarie Cloud Services, we make it easier for you to migrate workloads and data. We understand that you don't want to be chained to one provider forever, so whilst we hope you stay around, the way we build, and bill clouds makes it as easy to leave as it was to come.

Hybrid IT – Multi-cloud implementation makes the final transition away from self-managed, customer-owned infrastructure very simple.

Read detailed blog

2. An On-Premises and IaaS blend

At Macquarie Cloud Services we classify 3rd party data centre footprints and customer on-premises infrastructure in a similar, but not same light.

Why, you ask? With the advent of high-bandwidth, inter data centre network providers, often able to offer short (month-to-month) contracts, businesses can now procure high bandwidth network services rapidly, and economically. Inter data centre bandwidth, gives businesses a "LAN-like" experience at a palatable cost between most of the major data centres, to facilitate a Hybrid IT outcome.

On-premises has one fundamental difference - chances are businesses aren't housing a high bandwidth carrier interconnect or point of presence. This means they're now subject to an entirely different conundrum.

Customer premises network services are typically less flexible, offer lower bandwidth and come at substantially higher price. So, what does that mean for Hybrid IT adoption?

It means businesses have to pick their battles to ensure the end user experience is, if not improved, at least constant - and implementation is a step in the right direction, rather than another cleanup project that they need to add to the list.

Value 'as-a-service'

Some specific on-premises use cases and how some very common problems can be solved.
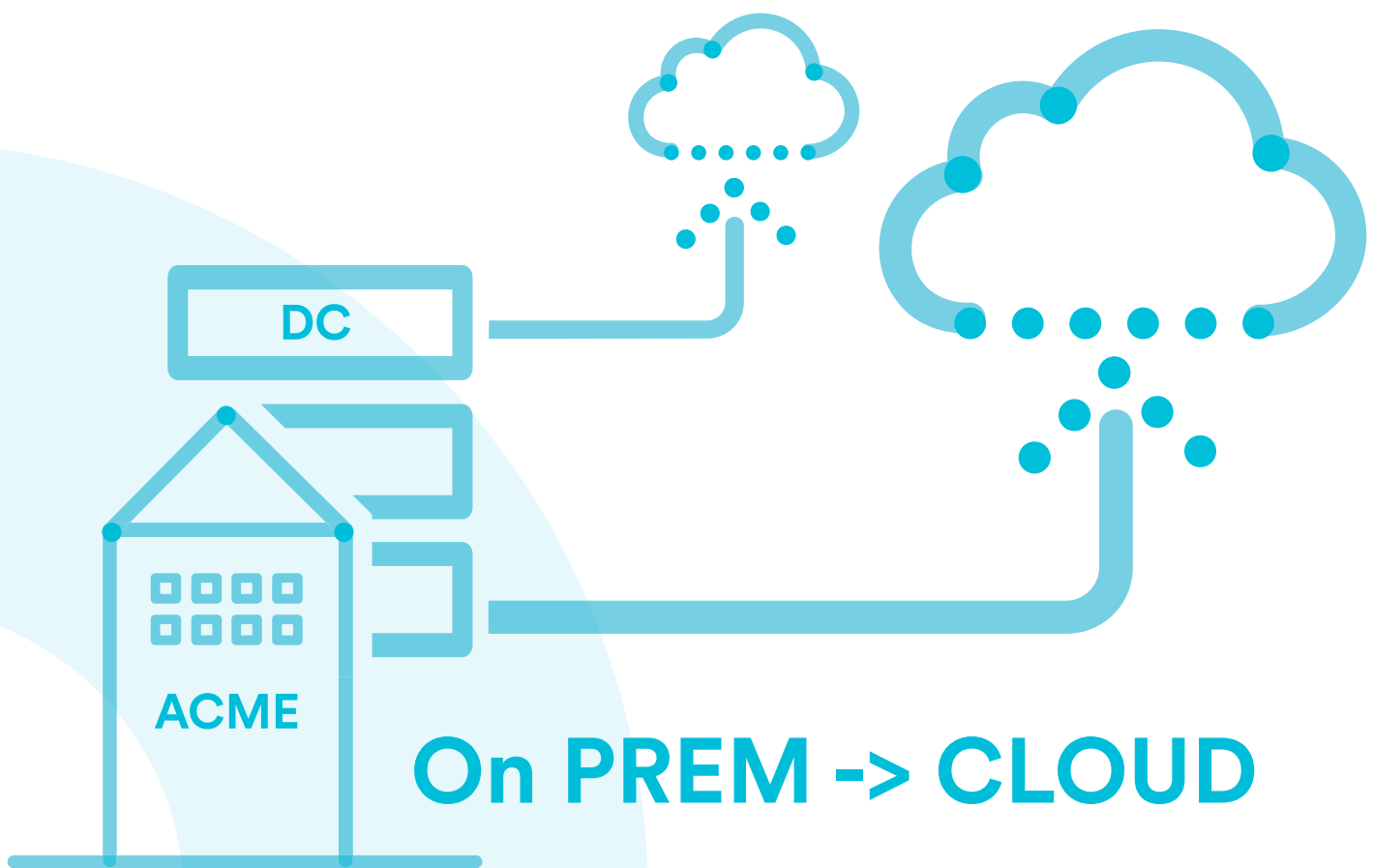
On PREM -> CLOUD

What customers get?
Businesses can pigeonhole this type of solution as Mode 1 Hybrid - A way of extending the useful life of existing assets whilst removing the constraints of capacity which are the most common negative side effects of in-house/on-prem infrastructure deployments.

Backup data archiving to free up on-prem backup repository capacity for shorter-term backup sets accommodating ever growing source datasets. As a bonus its offsite too.

Replicated datasets for file type repositories where snapshotting can be more effective than traditional backups, and provide a DR capability at the same time.

Network Attached Storage (NAS) that utilises tiering policies based on frequency of access, which means businesses can seamlessly extend capacity beyond their on-prem file infrastructure and avoid increasing the physical footprint mid write-down, also avoiding any additional CAPEX.

Siloed compute workloads with different user requirements. To free up production compute and storage resource that's housed onprem, businesses can migrate non-prod (or other environments) workloads to a cloud platform like MCS LAUNCH and enjoy a non-prod environment that also reduces any risk of any production system interruption or outage.

Source side deduplication features in backup software also mean that adopting remote backup (as-a-service) isn't as bandwidth hungry and may help to avoid backup software or hardware maintenance renewals that will only delay cloud adoption.adoption.

Network services are less flexible, lower speed links at substantially higher costs. So, what does that mean for hybrid IT adoption?

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Read detailed blog

3. Hybrid Cloud Networking

Cloud Services Gateways and their relevance in a Hybrid Cloud world

SaaS

PaaS

SD-WAN

ACME

HOME WORKER
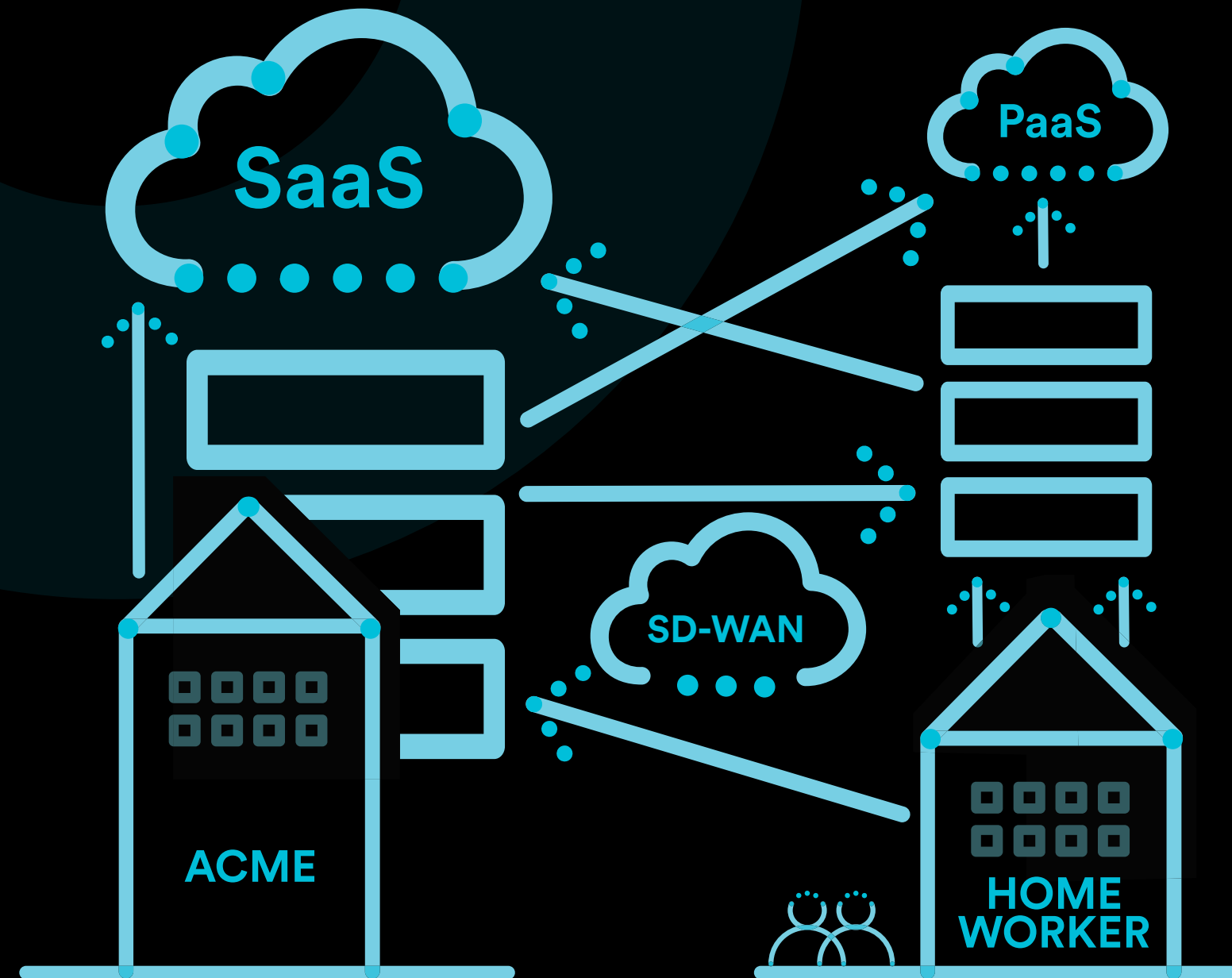
MULTI CLOUD, HYBRID WAN

Having worked with a number of our clients and prospects, finding the right blend of cloud based products and services to incorporate into the larger technology solution, the following considerations are critical.

1. Internet

The true backbone and facilitator of cloud. The main downside however is cost. Especially in Australia, internet is still really expensive. The trick with internet is to use it as little as possible to optimise costs. Building highly resilient multi-site networks is expensive in the context

of networking and security infrastructure. That's one of the reasons cloud services are so appealing.

2. Flexibility and cost

Internet services and non-traditional network providers, many with native SD-WAN implementations, mean that not only can the contracts be flexible in the context of term, but the underlying technology is capable of rapid scale up or down. This can facilitate more transient, project based requirements or in some cases massive fluctuations in throughput requirements that may be caused by expected or unexpected circumstances. Even more commonly, massive customer data migrations have a huge networking requirement as workloads are shifted between clouds. Rapidly scalable, Hybrid Cloud networking has a huge role to play here.

3. Hybrid Cloud adoption & Networking Skills

A massive swing towards SaaS, PaaS and hosted workloads has simplified the user/consumer side of the equation but has pushed the complexities to the cloud and network providers as they manage ever growing volumes of traffic riddled with ever evolving security threats and challenges. A clear understanding of how to reduce risk, maintain performance and set up for success both technically and commercially is very critical.

4. Security and Resilience

As Hybrid Cloud adoption has become the norm, we have had to find ways to consolidate a security management and monitoring capability across multiple infrastructure stacks. This means that all deployments need to be thought through and implemented with a security conscious mindset. In doing so, businesses are well served to establish foundational networking capabilities, that can be scaled up when needed rather than provisioned and configured.

5. Evolution of the WAN

Wide area networks have been going through their own evolution over the last decade based largely on cloud adoption. We've seen 80% of traffic now being bound for the internet in contrast to the corporate network. Rather than aggregating all internet bound traffic via a WAN and then through head office or datacentre firewalls, networks are more web centric now offering more direct paths to SaaS and PaaS providers. The success of this deployment model is based on centralised access policy management, allowing network administrators to have granular controls and visibility of traffic flows, balancing end user experience and security.

What customers get?

Macquarie Cloud Services has developed a range of networking products including Cloud Services Gateway (CSG) portfolio to facilitate business grade Hybrid Cloud networking capabilities.

MCS networking product development can make your Hybrid Cloud adoption affordable, secure and flexible.

Read detailed blog

4. The Whole Shooting Match

"Any cloud" Hybrid Cloud

At the end of the day there are so many choices out there as to where to host/house your virtual infrastructure/assets that there is no one-size-fits-all. The same software technology used by two different organisations may be well land on two fundamentally different infrastructure/platform solutions.

For a successful consultancy engagement, you need help from an entire network of subject matter experts, not just one person's beliefs, experiences, or preferences.

A good consultant acts like a project director. They co-ordinate a team of expert opinions and provide structure and logic to the bigger picture response. They collate the findings, align them with the client use cases to rank and prioritise recommendations to maximise the client outcomes.

Within the MCS Consultants Group we have huge amounts of in-house expertise and external networks to draw on when offering our clients and prospects advice. One of the most powerful of these resources is the product management team. Our product evaluation and productisation process is scrutinised by everyone from chief architects to the CEO, operations and service assurance, service delivery and even sales.

For a client looking to enhance their customer service metrics, we introduced the client's key stakeholders to the managers of our service assurance (HUB and HMC) groups. This helped us understand what they were trying to achieve, and how.

What to consider for technology adoption?

Application interdependence	Company culture	Technical debt	Appetite for change	Human emotions

As it turns out, multi cloud or Hybrid Cloud adoption means you could end up with not just one, but a whole bag of lemons. The goal however is to get the product (and outcome) mix right for you. At MCS, we like to take the time to understand your requirements and work with your organisational and individual needs and wants.

Read detailed blog

Case Study - CURA Software

Delivering a robust architecture, a migration plan and ongoing operational and service support.

The Situation

CURA Software develops and deploys governance, risk and compliance software, with specialisation in assisting companies manage their certification standards for business management like ISO, COSO, COBIT, HIPPA, SOX, KING III, and BASEL. With 250+ clients across North America, Australia, Singapore, India and South Africa, the needed a reliable, robust hosting solution that catered for multiple regions.

Impact at a Glance

- Immediate cost savings
- Scaleability and flexibility across entire IT instance
- Transparency of costs
- Single vendor approach
- Service excellence and continued uptime
- Productivity efficiencies and focus on core business

The Solution

With Macquarie's Hybrid Cloud solution, migrating became easier with immediate cost savings. In Hybrid Cloud approach, Macquarie Cloud Services hosted CURA's Australian region within their Tier III Sydney-based data centre and their European & North American region through a Public Cloud. With Macquarie Cloud Services launching a Public Cloud offering, Cura were able to leverage this by consolidating their operations and have one global provider for their entire environment.

Result

- 20% immediate cost savings and 40% when compared to their existing Public Cloud solution.
- With itemised and clear billing, CURA is now aware of monthly charges
- All regional IT hosted within one vendor, consolidating operations
- 24x7x365 local-based support, including a four-tiered dedicated account management team
- Productivity efficiencies and focus on core business

> "Having one vendor host and manage our Hybrid Cloud environment allowed us to focus on core business."

Nitin Dittakavi, VP Engineering, CURA Software

> "Initially, we were looking for a partner who both fulfilled the stringent compliance criteria required of hosting our customers' sensitive data and a strong service orientated DNA."

Nitin Dittakavi, VP Engineering, CURA Software

Case Study -
V³ Leisure & Tourism

Delivering authentic Hybrid IT infrastructure with a blend of Private Cloud combined with Public Cloud for its overseas regions.

The Situation

Founded in 2001, V3 provides SMEs with the same opportunity to market their products online as the big hotel and resort chains. The WA-based business is the industry leader in travel exchange technology. V3's exchange model assists all types of travel businesses and destinations, gaining more online bookings by using the world's best network of traditional and alternative distributors, unique data analytics and powering their own website for direct bookings. As the leader in travel exchange technology, V3 needed a robust local cloud solution to host their rapidly growing environment.

Impact at a Glance

- Consolidated infrastructure solution
- Agile and scalable solution
- Highly available (99.95%)
- Access to local expertise
- Service excellence

The Solution

V3 initially decided to migrate its Australian instance to Macquarie Cloud Services' Private Cloud (Launch) platform. The Launch solution provided a dedicated availability zone locally and stringent SLA's (99.95% uptime) that directly mirrored their own SLA's to their customers.

While extending to international markets like UK, Indonesia, Japan and other regions, V3 decided to leverage Macquaries Public Cloud offering. With further plans of expansion to the USA, Africa and further into Europe, V3 now enjoys the expertise and service excellence of Macquarie for the onboarding of these regions into their Public Cloud platform. V3 now has an authentic Hybrid IT infrastructure with a blend of IaaS combined with Public Cloud for its overseas regions, all within the one vendor – Macquarie Cloud Services.

Level 1 Macquarie Cloud Services Private Cloud	Level 2 International markets - Public Cloud	Level 3 Macquarie Cloud Services Private Cloud

> ❝ A key decision to migrate our environment to Macquarie's Private Cloud was the enterprise grade infrastructure provided. We get a level of comfort that the SLA of 99.95% uptime directly mirrors our own contracts. In terms of compliance, it also helps us maintain our PCI DSS certification, which is essential for our core business ❞

Jim Swaby, Technology Manager at V3.

Result

- A single supplier for multiple clouds, across multiple regions
- 99.95% uptime and availability
- Satisfying compliance and regulation. With ISO 27001, the highest level of global data security and PCI DSS v3.2.1, the highest global standard for payment card data, V3's clients can rest assured their data and payment transactions are safe.
- Access to industry leading service, with Australia's best NPS rated technology provider

> ❝ We had self-managed Public Cloud previously, which wasn't an overly positive experience. Being familiar with Macquarie meant we knew we'd have local support. The level of expertise provided means we can rest assured. ❞

Jim Swaby, Technology Manager at V3

More customer stories at https://macquariecloudservices.com/customers/

Find a blend that's right for you.

Macquarie makes the transition to cloud easy. Whether it's combining IaaS, Public Cloud, on-premises or CoLo, we've got a solution to fit your business.

With more businesses taking the leap, reap the benefits of a custom cloud solution to match your workloads.

Opening the next wave of technology adoption with the Cloud.

Enhanced Productivity
78% of businesses using cloud services reported improvements in productivity*.

Employment
48% of businesses using cloud services reported an increase in IT staff*.

Economic Value
Australian cloud services expenditure will reach **$7.7** billion by **2021***.

Agility in processing large volumes of data

Scalability facilitating global deployment

Enabling a range of operations and applications

Gaining insights and streamlining processes

Embrace cutting-edge technologies.

We've got your back.

Hybrid Cloud is the way to go. With different applications and workloads come different needs. Often running workloads across the Public Cloud, Private Cloud or on-premises is the best way to maximise IT investment and safeguard your unique environment.

Being Australia's most recommended cloud provider, Macquarie Cloud Services specialise in custom built Hybrid Cloud solutions underpinned by our industry-leading storage partner Dell Technologies.

📞 **1800 004 943**

[1]https://www.arnnet.com.au/article/669651/Hybrid-Cloud-set-push-aussie-it-services-spending-24b-by-2023/
[2]https://www.crn.com.au/news/aussie-companies-lean-on-channel-for-cloud-management-skills-523273
*https://www2.deloitte.com/content/dam/Deloitte/au/Documents/Economics/deloitte-au-economics-value-cloud-services-australia-230719.pdf

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