

WHITEPAPER



# The Economics of Cloud: Why the hyperscalers will cost you more every time.

4 guiding principles for evaluating  
your cloud investment.



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## “Do more with less.”

It's a familiar refrain to IT teams everywhere that perfectly captures the often-challenging expectations of IT. Today's IT departments are charged with not only “keeping the lights on,” ensuring that daily operations run quickly, efficiently, and without disruption, but also large-scale digital transformation. Keep everything up and running, enable dramatic change -- and do it all on a flat or declining budget.

Organizations trying to “do more with less” often look to the cloud. It has become a common assumption that adopting cloud computing will automatically translate to reduced costs. But the reality can be a different story. In fact, without the right cloud provider, the true costs of cloud computing can add up fast.

How can you choose the best cloud provider for your business? Are hyperscalers like Amazon Web Services and Microsoft Azure actually good investments? In this paper, we will cover four guiding principles that will help you evaluate your options and achieve your cost goals before you deploy new cloud technology. Then, we'll look at a real-world comparison of how the island cloud compares, dollar-to-dollar and service-to-service, to popular hyperscalers.

# IT cost savings never went out of style.

Don't call it a comeback: reducing costs has been a top priority for IT departments for years. The COVID-19 pandemic, however, did emphasize and accelerate its importance. [According to Deloitte:](#)

# 74%

Increase in cost reduction initiatives since pre-COVID

To implement those strategies, many organizations immediately cut specific projects out of the budget and shifted funding from low-priority projects to support higher-priority needs. During periods of uncertainty, like 2020, this is a logical approach to "weathering the storm." It enables companies to complete their most important projects while aligning to lower IT budget expectations.

# 2/3

Of companies are now pursuing cost reduction strategies

This approach works until it doesn't. Businesses often find that if their data grows at 30-50% per annum and their budget remains flat, eventually they will have to cut into high-priority project spend. How quickly this happens depends on how fast the volume of data is growing and the extent of the cuts; both faster data growth and bigger cuts correlate to a shorter time frame of success.

# 40%

Plan to grow their cost reduction strategies in the next 12 months

IT teams can buy time through timeframe extensions, project scope reductions, and other means of delaying the inevitable spend. They can shore up inefficiencies in the traditional on-premises data center with virtualization strategies. Eventually, however, they need a new way to manage increasing data and demand with a decreasing budget.

# Investment in cloud continues to grow.

Enter cloud computing. Organizations have been moving to the cloud for years, and for good reason. Cloud offers a variety of benefits, from agility, flexibility, and scalability to efficiency and cost reduction.

Cloud services spend was already **growing much faster** than on-premises IT spend at the beginning of 2020, and the momentum only increased during the pandemic. Cloud spending increased almost 20% in 2020, while overall IT spend fell by 8%. From shifting CapEx to OpEx to supporting the newly remote workforce, companies have seemingly endless reasons to move to the cloud.

**HOW DOES THE CLOUD REDUCE IT COSTS?**

Traditional, on-premises data center costs (sample)	Cloud costs
Storage management and depreciation	Eliminated
Physical server management and depreciation	Eliminated
Network management and depreciation	Reduced
DC power	Eliminated
DC cooling	Eliminated
DC floorspace (real estate)	Eliminated
Upgrade costs	Eliminated
Hypervisor costs and maintenance	Eliminated
Software costs and maintenance	Vendor specific
Data protection and disaster recovery	Vendor specific
HW/SW customer support	Vendor specific
Strategy and planning	Vendor specific
NA	\$/GB/CPU/vCPU/Month

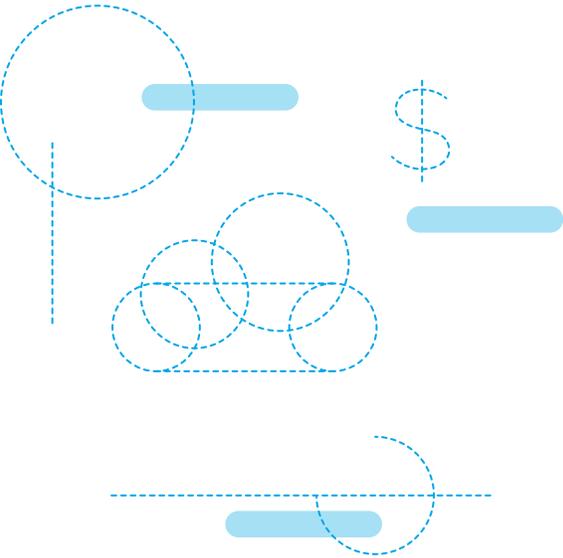
The “why” for shifting to cloud computing is clear, but the “how” can be more challenging. With so many cloud providers, it can be difficult to look past big brands and “buzzword features” to choose the right partner for your business.

Choosing the right provider is particularly relevant to cost reduction. Not all clouds are equal in terms of cost savings to the adopting organization. While any cloud can probably reduce the costs of a traditional, on-premises environment, the difference in additional savings that can be achieved between cloud providers can be significant.

This, of course, begs the question: how can you choose a cloud provider that will deliver the performance you need AND maximize your cost savings?

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## Build an economic framework.



Like any technology decision, choosing the right cloud can and should include comparing features, capabilities, and metrics across providers. When reducing costs is one of your primary drivers, though, your decision-making process should reflect that objective. Introducing an economic framework can help you set achievable expectations for both cost and performance.

This framework provides an objective platform to assess the value of an IT investment, cloud or not. It’s designed to help you go beyond simply trusting that a technology provider will lower your costs by uncovering precisely how they will do so, effectively reducing your overall costs of IT.

1

**Understand your driver for change.** No initiative exists in a vacuum, and cost reduction is no different. It's important to remember your overall requirements and objectives alongside your mandate to lower costs. Think about the shift in terms of value, not dollars. What value does the move to cloud provide, by virtue of greater speed, flexibility, agility, and/or the ability to accomplish things that wouldn't be possible in a traditional environment? Put another way, try not to let the need to reduce costs become blinders that put your real business imperatives at risk.

2

**Lowest price doesn't equal lowest cost.** Don't trust the "sticker" price. It's critical to fully evaluate the exact costs that your company will incur from any vendor, which can vary widely based on scale, accessibility, speed, and other business requirements. Think about it like buying a car. You may see the lowest monthly car payment advertised, but it doesn't include insurance, gas, and maintenance, which can vary from model to model. Further, that low monthly price might be for the base model, which doesn't have the features you want. The same considerations apply to cloud providers specifically and IT in general.

3

**Measure twice, cut once.** This well-known carpentry proverb is just as applicable to cloud. Cloud can be easy to deploy but effort-intensive and costly to undo. Perform your due diligence up front. Measure every cost and capability thoroughly before deployment for complete visibility into what you will pay and what you will get for your investment.

4

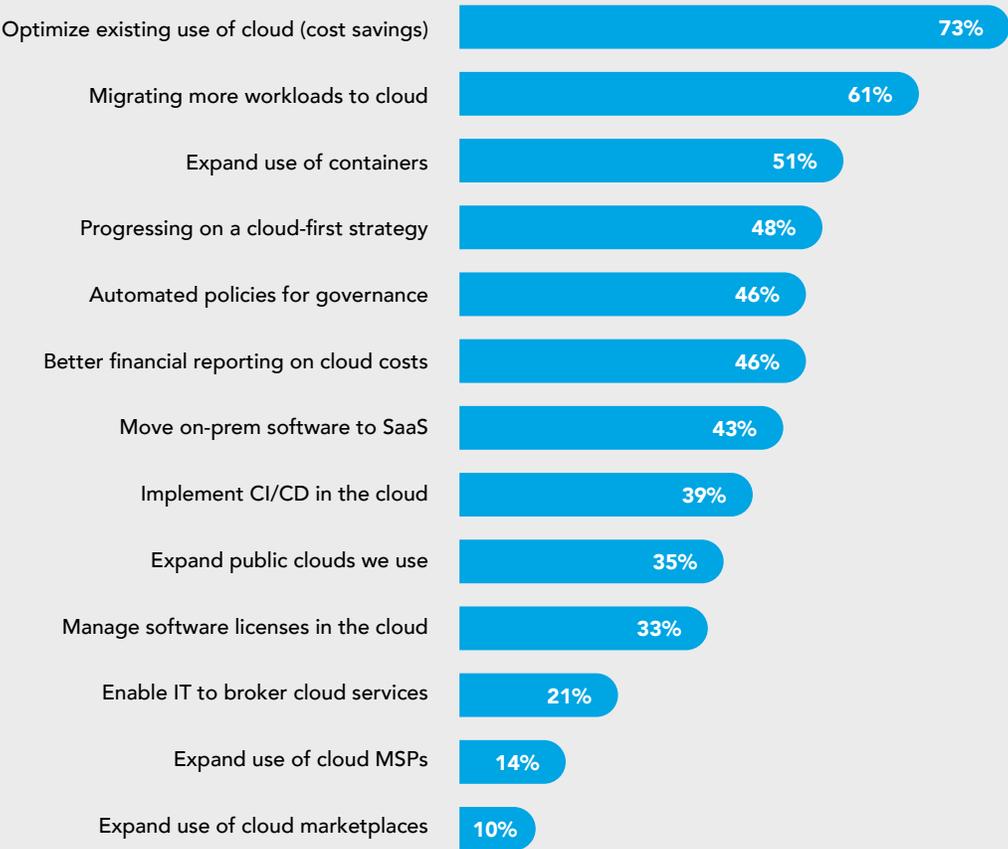
**Cloud infrastructure matters.** There are technologies that will be superior to others, for your specific business and in general. At iland, for instance, we run a VMware-based cloud. As a result, if you are a VMware user, the benefits of iland will be dramatic, especially when compared to a non-VMware-based hyperscale provider.

Let's take a closer look at how these principles play out in the real world.

### MOST POPULAR DOESN'T MEAN MOST COST-EFFECTIVE

Many organizations look to hyperscalers like AWS, Azure, and Google Cloud to reduce costs through cloud adoption. Unfortunately, that doesn't always work out as planned. 73% of hyperscaler customers want to optimize existing use of their cloud -- in other words, enable greater cost savings. They may be popular, but they're also expensive.

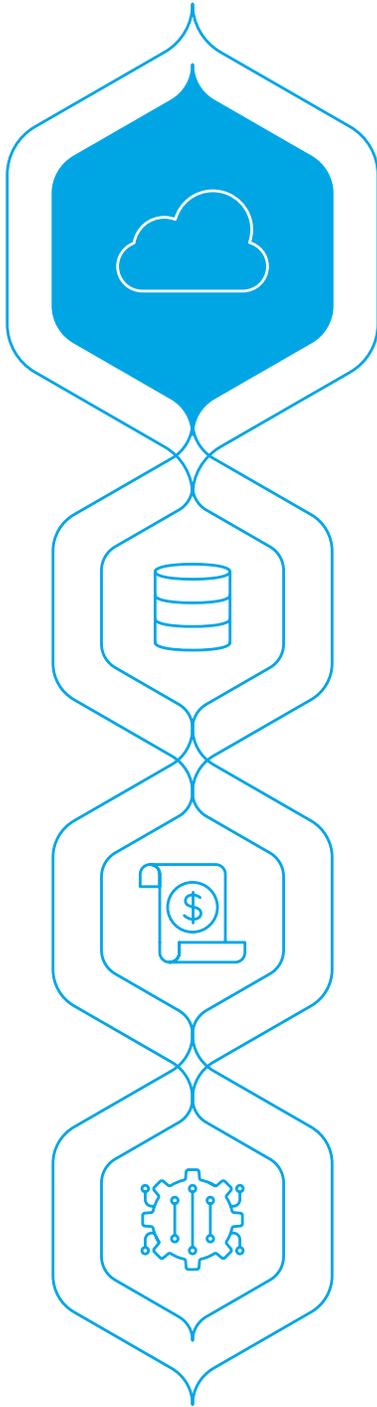
**Top Cloud Initiatives for 2020** % of all respondents



N=750

Source: Flexera 2020 State of the Cloud Report

## Start crunching numbers: 3 reasons the hyperscalers will cost more every time.



When most people begin to price out a cloud migration, they start with the basics: how much compute and how much storage they require, and how much each vendor charges to meet those requirements. This appears straightforward on the surface. Especially in a rehost scenario, when it feels like an apples-to-apples shift from the data center, it can be easy to oversimplify and underestimate the full cost of the move.

This happens for a number of reasons. To start, many of the integral components of an on-premises infrastructure, like network security and monitoring day-to-day operations, aren't factored into the equation for cloud services. For big hyperscalers like Microsoft Azure and Amazon Web Services (AWS), they are sold separately -- and can add up fast. In addition, the way the hyperscalers package and price compute and storage frequently results in paying for more CPU and Ghz than you need. They also don't allow you to adjust your costs if you don't use all of your allocated resources.

Let's look at an example; ACME Inc. is ready to move to the cloud. Because they're just getting started and aren't certain of their ongoing needs, they choose pay-as-you-go pricing. They want to match their current on-prem requirements, which are 6 vCPU and 8GB of RAM. What do they encounter as they explore their options?

## TCO vs. ROI: PRIORITIZE TIME TO VALUE

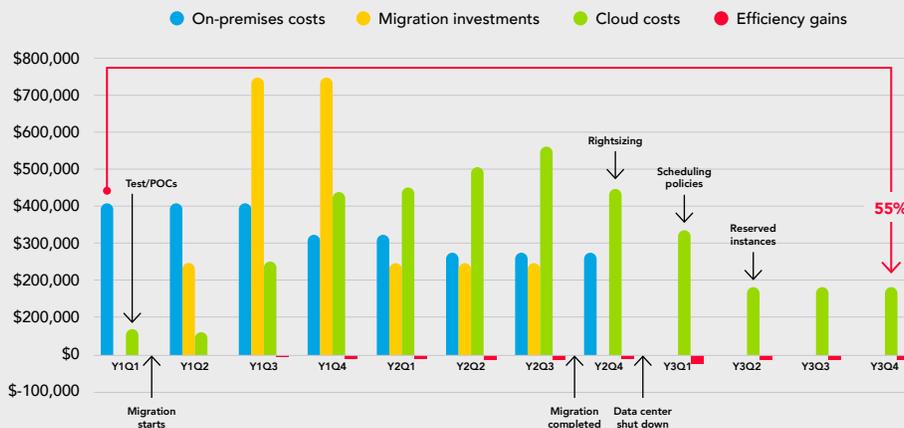
Hyperscalers commonly claim that they will dramatically reduce total cost of ownership (TCO). That can be true -- if your organization is able to fully evacuate the data center and has the skill set to right-size its public cloud, initially and on an ongoing basis. Even then, however, the return on investment is slow. Gartner found that in a typical migration to a large public cloud provider, ROI was -171% after three years and only became positive seven years in.

For many companies, seven years is just too long. iland's rehosting approach helps you realize that value more quickly, with less complexity and lower cost. iland customers not only reduce TCO, they see better ROI, faster.

### From 'Cloud First' to 'Cloud Smart' Strategies

Not all workloads should move to hyperscale public cloud.

**Example TCO of Migration to Cloud IaaS Over Three Years**



ID: 365833

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- Three-year journey to migrate
- Cost to migrate (i.e., replatform or refactor) is high and overlooked
- Lower TCO if the customer a) fully evacuates data center, and b) has skill set to right size public cloud
- TCO is not the same as ROI
  - 55% TCO reduction
  - -171% ROI (7 years for ROI positive)
- Customers need a cloud that accelerates time to value and reduces cloud migration risk

## Issue #1:

### Paying for more than you need and more than you use.

When the ACME IT team evaluates Azure, they discover that there are hundreds of different instance sizes to consider. Azure doesn't, however, offer 6 vCPU of compute, only 4 or 8. The team must choose between rounding down and potentially compromising on performance, or rounding up and overpaying. The RAM scenario is similar. They only need 8, but to get a production instance, their only option is 28 GB of allocated RAM.

The issue with this model is already apparent: ACME is paying for more compute and storage than it needs. But the numbers don't convey the fact that it's actually significantly more than they need. In practice, CPU and Ghz consumption rarely matches allocation. Most environments are configured to meet application vendor specifications, which reflect the requirements that the application was certified against. The vendor may say that a machine must have X amount of CPU and Y amount of RAM to support the application, but the machine almost never consumes those resources.

When you dig into consumption metrics (and you should as part of your cloud migration process), you will likely see that you only consume a fraction of what has been allocated. That doesn't mean that you shouldn't allocate based on vendor specs -- it is still best practice to do so -- but that you should look for a pricing model where you only pay for what you consume.

This is the true promise of cloud: paying only for what you use. When you rely on hyperscalers, however, it's rarely the reality. Hyperscaler customers almost always end up paying for far more than they need. In fact, according to Gartner, companies that make mistakes during due diligence and cloud adoption can overspend by 20-50% indefinitely.



*Companies that make mistakes during due diligence and cloud adoption can overspend by 20-50% indefinitely.*



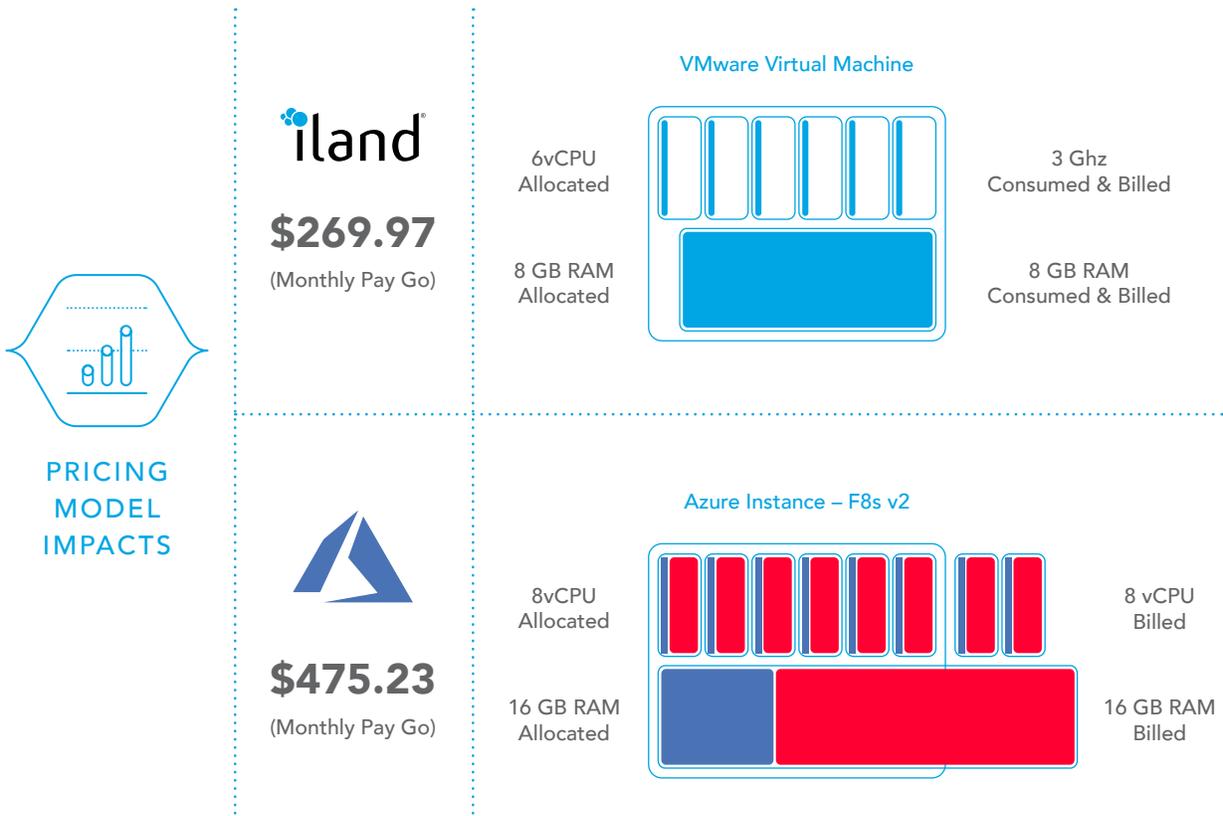
Gartner's "Lessons Learned From the Most Common Mistakes Made By Cloud Infrastructure Adopters," by Analyst Miguel Angel Borrega (8 May 2020).

## WHAT ABOUT LESS EXPENSIVE INSTANCES?

Less expensive instances, like the Azure A Series and AWS T Series, may initially appear more cost-effective. The fine print, however, makes it clear that instance types not designed for production workloads can face serious constraints. Some are limited in volume of throughput, or network I/O, or the amount of disks you can attach. The instance may have the right specs on face value, but further examination reveals that the lower-priced VMs aren't usually suitable for production.

### The iland approach: Customize your allocations, then pay for what you use.

When ACME compares iland to the hyperscalers, they discover a different approach. iland customers can choose the precise compute and storage allocations that they need to ensure their applications are fully supported. If they don't consume those resources, they aren't billed for them. It's that simple.

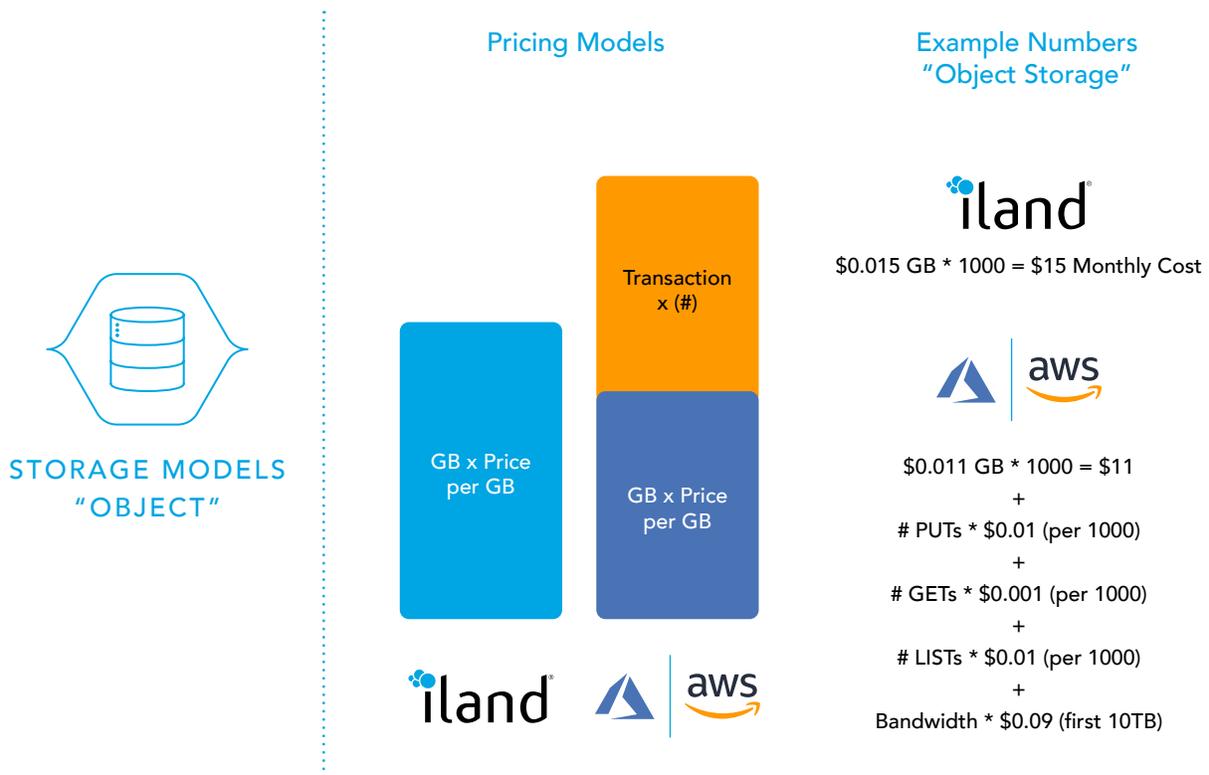


## Issue #2: Drowning in transaction costs.

Next, the ACME IT team assesses how each cloud provider sells storage. Like many organizations, ACME plans to use the cloud for object storage to support its backup strategy. Azure and AWS have stated prices per gigabyte (GB) of storage, but also list transaction costs that can impact the final spend.

The hyperscalers break every bit of data into “chunks” or objects. Hundreds of gigabytes or terabytes translate to millions and millions of objects, which all incur metered transaction costs. Every time you run a data-intensive process, like a full backup or initial sync, you shift a tremendous amount of PUTs, GETs, and LISTs and use significant bandwidth, all of which add on to the sticker price-per-gigabyte. Similarly, if you need to retrieve your data, to execute a restore for example, you will encounter additional retrieval fees and substantial bandwidth egress charges.

As a result of hyperscalers’ transaction costs, companies can end up paying 40-60% more for storage than they anticipated.



\* Assumes daily change of 2-4%, monthly growth of 1-2%



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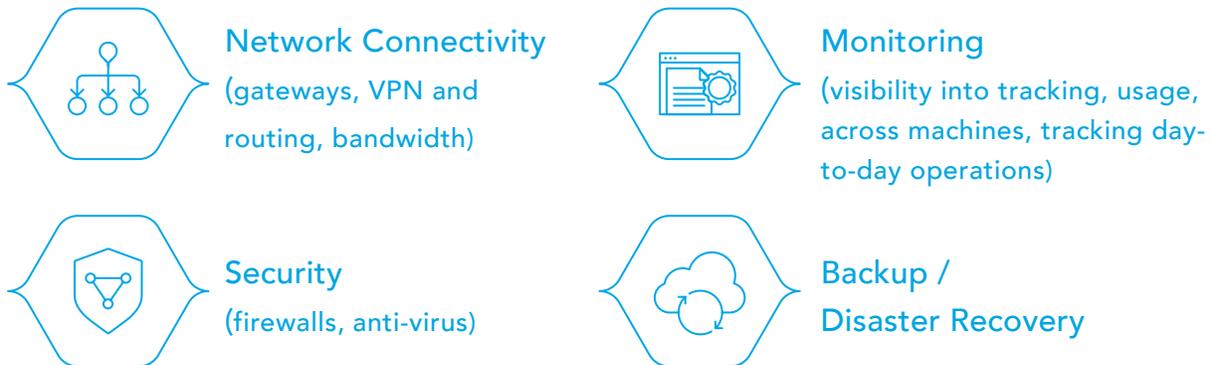
**The iland approach: GB x price per GB, period.**

No transaction costs here. At iland, we price storage by multiplying the volume of GB by price per GB. This applies to iland Secure Cloud (IaaS) and iland Secure Cloud Object Storage. It's as simple as that.

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### Issue #3: Nickel and diming of essential services.

Companies commonly fail to assess the full cost of a cloud migration because many fundamental components that are built into on-premises environments are "extras" in the cloud. These all bring about additional costs, and include:



When our fictitious ACME Inc. compares overall pricing across the hyperscalers, including all of these components, it adds thousands of dollars to their monthly spend.

Responding to the sticker shock, they consider running the add-ons themselves, but quickly find the faults in that strategy as well. Moving to the cloud is intended to streamline and simplify IT infrastructure. When you begin to pull individual components out of that "big picture" -- monitoring, say, or security -- you are managing another solution that adds more complexity and cost.

**The island approach: Everything you need, fully included.**

With island, you get a complete cloud at a fair price. Our cloud service includes network connectivity, backup/DR, monitoring, our security suite, and industry-leading, 24x7x365 support. Just because services are included at no additional cost does not mean compromising on performance. These services are top-tier infrastructure, not commoditized afterthoughts.

island is not only more comprehensive and less complex than the hyperscalers, it's faster. You identify your requirements, then we help you get up and running fast. This accelerated time-to-value results in lower TCO and faster ROI, so your cloud investment can power your transformation—not bog it down.

				
 <b>THE COMPLETE CLOUD</b>	 Network Connectivity	No cost VPN/GW/ROUTE	\$365.50 VPN GW <sup>1</sup> \$92/TB Bandwidth	\$357 VPN GW <sup>4</sup> \$86/TB Bandwidth
	 Backup/DR	Integrated Options (Cost per GB)	\$12.50 per VM <sup>2</sup> Restore charges apply	\$10 per VM + <sup>5</sup> (Cost per GB)
	 Monitoring	Integrated 12 Month	\$12 per VM <sup>3</sup>	\$3.8 per VM + storage charges
	 Security Suite	No cost FW/AV/IDS/Web-rep	\$284.4 – FW \$21.60 – Trend per VM	\$912.50 - FW \$14.60 per VM <sup>6</sup>
	 Support	No cost 24/7/365 Top Tier	\$100's–\$1000's/Mo Varies on spend	Up to \$1000/Mo**** Varies on tier level
 <b>THE COMPLETE COST</b>	 Network Connectivity	\$0	\$365.50 VPN GW \$92 Bandwidth	\$357 VPN \$86 Bandwidth
	 Backup/DR	\$609.50/Mo	\$1250/Mo (excluding restores)	\$1000 + \$100/Mo (excluding restores)
	 Monitoring	\$0	\$1200/Mo	\$380/Mo
	 Security Suite	\$0	\$2434/Mo	\$2372.50/Mo
	 Support	\$0	\$372/Mo (using 10% estimate)	\$1000/Mo
Additional cost excluding compute and storage:		<b>\$609.50</b> /Mo	<b>\$5713.50</b> /Mo	<b>\$5795.50</b> /Mo

<sup>1</sup>Assumes AWS VPC /w 5 S2S VPNs + 10 SSL VPN users per day  
<sup>2</sup>Backup assumes 100GB VM with 30 daily snapshots  
<sup>3</sup>Assumes 3 metric per VM log capture and 10GB of log data per month  
<sup>4</sup>Assumes AZ VPN GW2, <sup>5</sup>Azure Backup, <sup>6</sup>Not an island Equivalent

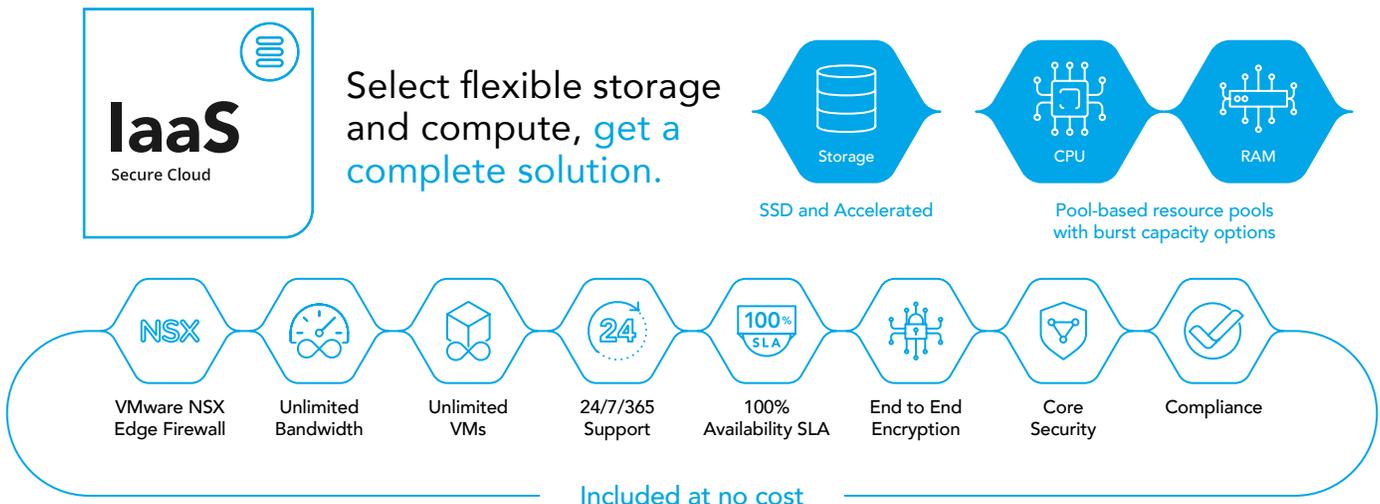
## A more economic approach with iland.

At iland, we believe that cloud should actually deliver on the promise of paying only for what you use. We think cloud services should include everything you need to successfully operate your infrastructure. And we support our customers every step of the way toward meeting their objectives and accomplishing their unique drivers for change.

With iland, you will:

- Right-size your cloud and pay only for the resources you use
- Leverage integrated backup and disaster recovery options for consumption on a per VM basis
- Enjoy unlimited bandwidth and VMs
- Stay secure with core security, end-to-end encryption, and compliance
- Never compromise performance with 100% availability SLA
- Get answers and solutions fast with 24x7x365 support
- See faster ROI than the hyperscalers

Right-size your compute and storage and only pay for what you consume/need.



So how should you approach the move to the cloud? Perform your due diligence. Dig into the weeds and examine the fine print when assessing the hyperscalers. Don't forget the four principles of the economic framework. And remember that when you partner with iland, you get the right formula to adopt cloud AND reduce costs.

The best way to learn more about iland is taking a test drive. Try the [iland Secure Cloud for 30 days free](#), backed by our team of experts ready and available to address your unique challenges.

# Discover the iland Difference



### BaaS

iland offers cloud-based backup to adhere to your goal of 3-2-1 resiliency. Leveraging encrypted communication and application trusted tunnels, this off-site, “air-gapped” version of your backup will be available to you if something were to happen to your local recovery. You can recover entire virtual machines, applications or files directly from the cloud.



### DRaaS

With DRaaS, iland enables organizations to meet their disaster recovery needs without requiring a secondary data center, additional hardware or even additional staff. With industry leading disaster recovery software and very tight RTO and RPO available, you can be assured that in any disaster (ransomware included) you can bring your environment online quickly with virtually no disruption.



### IaaS

Organizations running their workloads in the iland Secure Cloud have peace of mind that security and compliance are always our priority. We uphold a variety of global certifications and standards. So, no matter what industry and region you work in, we have ensured that the proper controls are in place. Coupled with built-in security reporting around vulnerability, network intrusion, malware and virus scanning, you can rest assured that the iland cloud environment is as robust as your own.



### Object Storage

Seamlessly extend your on-premises storage to the cloud and efficiently secure and manage your data for long-term retention of business and mission-critical data. Built for resilient digital businesses, iland Secure Cloud Object Storage offers industry-specific security and compliance, guaranteed availability and all-inclusive pricing. Managed through the iland Secure Cloud Platform, iland delivers an integrated experience with our other data protection services such as DRaaS and BaaS for a streamlined experience.



### Microsoft 365

Your Microsoft 365 emails and documents are safe and protected with iland Secure Cloud Backup for Microsoft 365. It directly integrates with Microsoft 365 to provide flexibility in how you protect your Exchange Online, SharePoint Online, and OneDrive data. You can quickly restore your mailbox items directly to your Microsoft 365 mailbox by exporting them to a PST file, emailing them as an attachment, or save them locally. This provides protection from deletion and data loss, gaps in retention policy parameters, Malicious insiders, and departing employees.

iland's world-class support is there with you for every step of your journey. Our indepth, consultative sales and onboarding processes ensure that you are as comfortable with your new cloud environment as you are with your own data center. iland support is always included and available by phone or through the iland Secure Cloud Console. iland engineers can help you with everything from managing DNS to invoking backup recovery and DR.



# Thank you.

## About iland

iland is a global cloud service provider of secure and compliant hosting for infrastructure (IaaS), disaster recovery (DRaaS), and backup as a service (BaaS).

They are recognized by industry analysts as a leader in disaster recovery. The award-winning iland Secure Cloud Console natively combines deep layered security, predictive analytics, and compliance to deliver unmatched visibility and ease of management for all of iland's cloud services. Headquartered in Houston, Texas, London, UK, and Sydney, Australia, iland delivers cloud services throughout North America, Europe, Australia and Asia.

North America: +1.800.697.7088

UK: +44 20.7096.0149

Netherlands: +31 10.808.0440

Singapore: +65 3158.8438

Australia: +61 2.9056.7004

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