

There's a Whale in Your Datacenter

Rethinking your cloud strategy could yield huge gains for your business.



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Rethink Cloud Strategy

You've heard the pitch. The cloud was supposed to accelerate application delivery, reduce time-to-market, and lower your costs. You may have built a private cloud in-house. Maybe you're still hosting on bare-metal servers. Or perhaps you jumped headfirst into public clouds like AWS or GAE.

It turns out that cloud infrastructure isn't particularly cheap or easy to manage at scale. Managing and optimizing your high availability, scalability plan, caching strategy, and disaster recovery are enough of a distraction from your core business initiatives. Add to that security, threat mitigation, and compliance – and you've got an entire division of operational infrastructure and support requirements that will only grow more painful as your datacenter footprint expands.

You need to be focused on what your business does best – not dumping tons of time and money into infrastructure operations that should otherwise be spent on product development, marketing, and other initiatives that are unique to your competitive advantage.

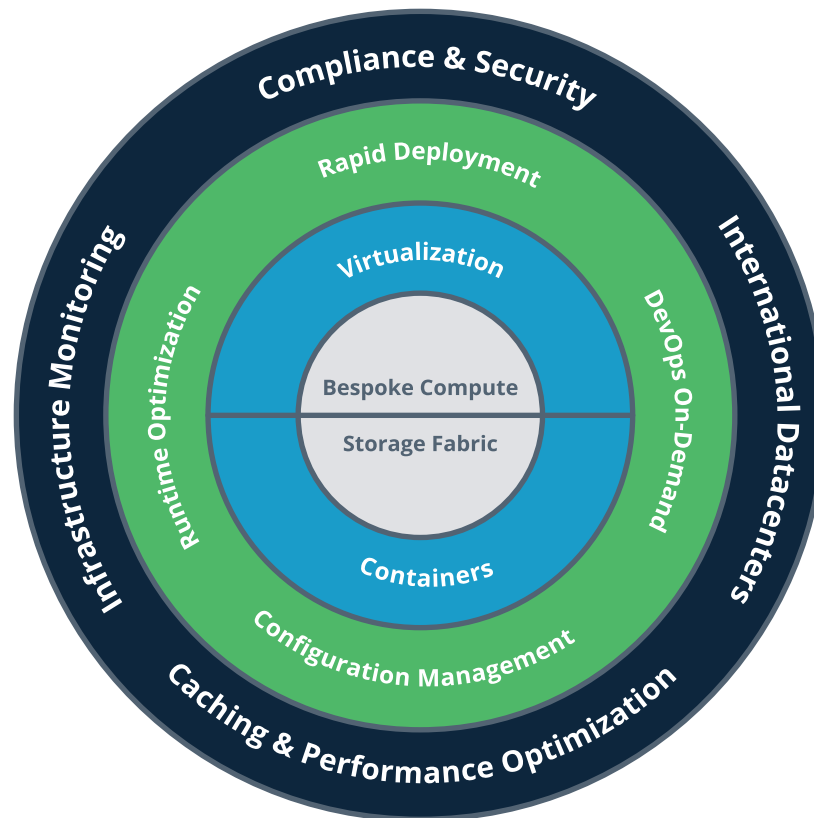
If you're growing quickly, the public cloud will get expensive at scale, and since leading public cloud providers don't provide consulting, you're going to need in-house staff or third-parties to help you optimize for cost and performance. And if you're considering the private cloud, you'll need to establish expertise in software like OpenStack and Docker. Organizations attempting to solve these problems often plow significant amounts of cash into disparate solutions, hybrid environments, and a combination of in-house and outsourced staff – resulting in a massive whale-of-an-expense.

Do you have a whale growing in your datacenter? **Lightcrest can help.**

Cloud Operations: Turning Pain into Profit

Lightcrest helps customers accelerate innovation and lower costs by providing them with a cloud operations model that allows them to hyper-focus on their core products and services. As a result, customers spend more time honing their competitive advantage to a razor's edge while retaining more of their hard-earned cash.

(see model on page 2)

Lightcrest Cloud Operations Model


Each tier of the Cloud Operations Model represents an abstraction of core infrastructure, expertise, and best practices that customers no longer have to maintain when they engage Lightcrest for FSE (Full-Stack Engineering) backed infrastructure.

Whether you're a software company or a brick-and-mortar with a substantial web presence, chances are that some or all of the services in the cloud operations model are critical to your business success, but not a core competency inside your organization.

Sure, you can tackle some of these in-house – but at what cost? And if you go the route of public cloud, at what point will the high costs eclipse the benefits of hourly billing? Do you even know if you're paying too much? An architect we recently spoke to at a media Fortune 1000 said they were paying AWS \$90,000/mo and wanted an out – but didn't have a private cloud alternative due to their compliance restrictions and lack of internal expertise.

Working with this individual, we discovered the equivalent private cloud infrastructure was 65% more cost-effective than continuing to run on the public cloud.

The Public Option

If you have short-term projects that require significant horizontal scale, or you want the flexibility to spin instances up and down with no long-term commitments – the public cloud is great.

But if you have a growing web application or production software suite where there is an established baseline of significant traffic, the inherent multi-tenancy of the public-cloud is going to cost you. Sure, the public cloud offers some great services and APIs if you don't care about vendor lock-in. But the public cloud could require you spin up to 4x as many instances to achieve the same performance you'd receive on a private cloud – and that is going to balloon your IT costs.¹

Performance and capacity aside, public clouds are designed to be consumed as self-service utilities. If you have compliance, security, and need a strong DevOps practice – the public cloud vendors are not going to bridge the gap.

The Private Option

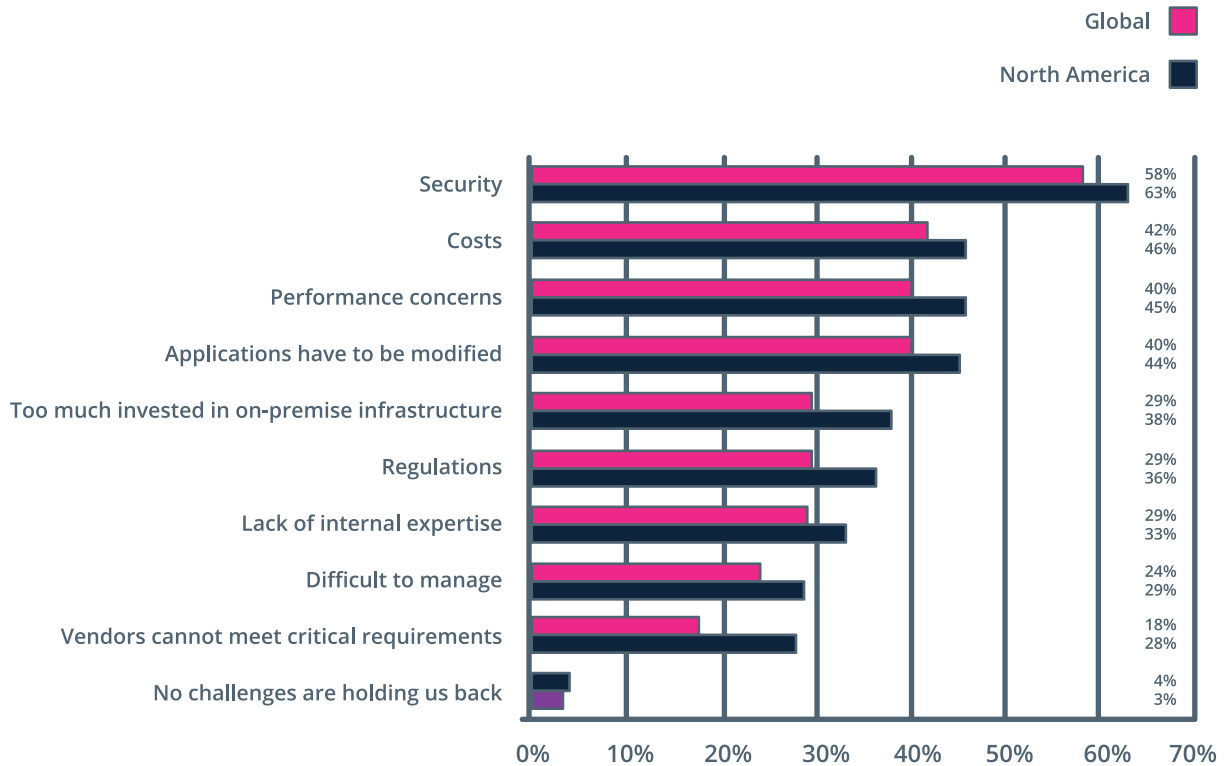
The private cloud, while a fixed cost, provides more computing performance and storage capacity per dollar spent. Furthermore, it makes it much simpler to maintain performance consistency (and thus a better user experience), and immediately addresses the security concerns CIOs normally have about multi-tenant public cloud. It's simply much easier to maintain a cohesive security strategy when you control all the infrastructure and you aren't sharing VMs with other tenants.

The downside with private cloud is the operational overhead and the expertise required to manage it effectively. How will your applications be quickly deployed across new infrastructure? Will you use OpenStack to deploy your VMs, or do you need the raw performance and resource isolation associated with Docker? Who is going to manage your compliance and security requirements as your private cloud grows? How are you going to optimize your storage infrastructure for maximum performance without ballooning costs?

¹ Migrating to a private cloud resulted in a 75% reduction in our server footprint. “ – Steve Oddo, CTO Walks of New York

Hybrid is the Future

According to Dimensional Research and Equinix Research, 77% of IT decision makers intend on building multi-cloud architectures.² The participants in this study did their homework – and have opted to go hybrid primarily due to the aforementioned cost and security concerns associated with the public cloud. They want the best of both worlds.



We don't blame them. If you want ideal cost and performance for perpetual workloads, you want a private cloud. But you also want the flexibility to burst into public cloud environments for short-term workloads or highly variable traffic patterns.

So given that hybrid cloud is ideal for the majority of enterprises and SMBs, what's the best way to manage the inherent complexity of both environments?

² Equinix and Dimensional Research, www.equinix.com/resources/analyst-reports/cloud-adoption-study

The Solution: Lightcrest Cloud Operations Model

Lightcrest analyzes each client's costs, workload requirements, and operational competencies to provide them with not only the ideal cloud architecture (whether it be private or hybrid), but also the on-going operations platform necessary to allow them to outperform their competition.

By combining premium storage and compute infrastructure with logical architectures that are informed by your application (and not by your legacy server infrastructure), Lightcrest FSE support personnel can provide clients with best-practices and on-going architecture expertise on top of a lean technology footprint. And if they need the flexibility that public clouds provide, Lightcrest provides them with local public cloud infrastructure and burst capabilities into third-party clouds via Equinix Cloud Exchange.³

The results for the customer? Immediate cost savings, an “over-night” increase in the customer's capabilities, and a higher-performing product.

Applications Come First

Lightcrest takes an application-centric philosophy when consulting with customers in the sales cycle. Your application is what drives the usage patterns and load variability across your cluster – and ultimately informs what optimizations can be leveraged to reduce load and thus total footprint. If you want to avoid “server sprawl”, you want to start with the application analysis. This is what many traditional providers don't understand – it's not about the servers, it's about the code running on your systems.

Do you have a write-heavy database? Are your application frameworks being JIT compiled? Are you doing full-text search on the right piece of technology? How aggressively are you caching dynamic content? Are you efficiently caching your database reads on the right side of the fence?

These kinds of questions should inform the initial strategy for your deployment. By looking at your application, runtime, and logical architecture – we can provide you with optimizations that significantly reduce your footprint while dramatically increasing the quality of the user experience.

³ www.equinix.com/pdfs/data-sheets/EQ/cloud-exchange

Conclusion

Do you have a whale in your datacenter? We can help you find out.

The potential gains in exploring an alternative to not only your existing cloud deployment, but also your operational support model could be massive. 