CloudKey℠
PLATFORM

Bringing the Cost of Cloud Computing Back Down to Earth

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Should Cost-Savings Come at a High Cost?

For many companies, cloud computing represents an array of benefits. Some of these benefits center on improved performance, agility, and scalability, while others are directly linked to cost savings. These include:

Optimized IT spend. Cloud computing can enable companies to avoid large expenditures for servers and data centers, and eliminate paying for idle infrastructure and system redundancies. The cloud can also help reduce the ongoing costs associated with maintaining, updating, and deploying IT infrastructure and solutions.

Streamlined workforce. For most organizations, the largest expenditure associated with IT is staffing costs. A migration to the cloud can enable a firm to either streamline their current staff, or devote existing staff to more profitable or promising areas of business.

Energy savings. Maintaining your own data center and IT infrastructure can be very energy intensive. A cloud service provider can help you avoid wasting energy on idle servers, and lower your overall costs of computing. Switching to the cloud can also help you reduce carbon emissions and reach your organization's CO2 and environmental initiatives.

However, capturing these and other cost savings comes at a price. And for companies that do not design their cloud environment wisely, that price may seem to outweigh the benefits.

In fact, Gartner estimates that as much as 70% of cloud computing spend is waste. In a recent survey, 60% of companies which shifted to cloud computing are rethinking that strategy.

While horror stories of cost overruns, inefficiencies, and missed opportunities abound, a properly thought-out cloud environment can provide a substantial ROI — if you take decisive steps to control costs.

5 Ways to Control the Cost of Cloud Computing

As with most initiatives, success relies on planning. With CloudKey, we help organizations develop a thorough plan designed to avoid the common pitfalls of cloud computing that companies frequently experience.

1 DON'T UNDERESTIMATE THE SIZE OF THE TASK AT HAND.

In a perfect world, there would be a single cloud environment configuration that was ideal for all organizations. But that's not the case. Different companies have different needs and demands. Designing a cloud environment and shifting your data and applications to the cloud requires planning, realistic timelines manpower, budgeting, and specific skillsets. To avoid the costliest mistakes in this area, be sure to do the following:

Identify all infrastructure issues early. Too often, leadership teams see cloud migration as a "lift and shift" that simply transfers their existing systems, processes, data, and applications to the cloud. However, there are an array of hardware and application issues that can surface along the way, including data transmission speeds, integration issues, and system compatibility. By including your IT teams at the earliest phases of planning, you can anticipate and avoid potential problem areas.

Make detailed and accurate timelines. It's no secret that internal IT initiatives often experience a degree of "scope-creep," and run into delays that lead to missed deadlines. You can minimize this by making a detailed evaluation of how much time each task should take. This is one area where an outside consultant can be particularly helpful. For example, in our experience, companies tend to underestimate the sheer amount of time it takes to transfer large quantities of data; a miscalculation in this area can throw a project off by weeks.

Conduct an honest assessment of your options for cloud computing partners. Your IT staff will play a crucial role in choosing the parameters of your cloud environment. However, too often teams will simply select the larger and more high-profile cloud service providers, or choose vendors they have worked with in the past. In doing so, they may overlook a range of cloud service providers that can offer better service, greater flexibility, or more affordable rates.

2 "RIGHT SIZE" YOUR CLOUD ENVIRONMENT.

For some smaller organizations that have an efficient, streamlined system, the "lift and shift" approach of simply moving all computing to the cloud may make sense. This tactic is initially attractive because it requires less up-front cost than pursuing a more strategic or customized approach. Deploying existing apps is also generally faster, rather than refactoring them for the cloud.

However, this approach can backfire in the long run; existing apps may not be able to fully leverage the potential benefits of cloud computing and can even be more costly to run in the cloud. For instance, many of your applications may contain features that were never deployed within your organization, or were seldom if ever used. By moving, storing, and supporting those unused features in the cloud, you increase your long-term computing costs.

In addition, deploying all your data to the cloud may prove too costly. For example, let's assume that a four-core 16 GB RAM server on AWS costs about 25 cents an hour on demand (or roughly $2,000 a year). Doubling the server to eight cores (or 32 GB RAM) would double the cost. Storage amounts can impact cost in much the same way, doubling costs in many cases as storage consumption grows. For an organization that primarily runs common applications with less demanding requirements, or frequently accesses only a small portion of data, migrating all applications and data to the cloud may result in costs that are substantial — and completely unnecessary. The wiser approach: Carefully analyze what applications, features, capabilities, and data really should be on the cloud, so that you can optimize your long-term ROI by "right sizing" your migration.

3 GET BUY-IN FROM YOUR INTERNAL STAFF.

For your executive team, cloud computing represents an opportunity to create improved scalability, efficiency, and performance. For your staff and IT team, it may also represent a change in workload, responsibilities, duties, and job description.

Getting buy-in from your internal staff — particularly the IT team — is integral to any successful move to the cloud. The degree to which they embrace this change can have a fundamental impact on how quickly your project goes, and how successful your cloud experience will be in the long run.

Keep in mind that securing their buy-in goes beyond letting them know what is expected of them. They need to also know how their day-to-day workload will be impacted or improved after the transition: How will their job responsibilities change? What will their new priorities be? What role will they play in a cloud computing environment?

Cloud computing can enable you to divert your IT team to more profitable areas of business — and in turn make them a more valuable part of your organization. By giving them a firm understanding of what awaits, you can set the tone for an easier cloud migration.

4 KEEP APPRISED OF BEST PRACTICES.

Like most areas of business, keeping up with best practices can make a fundamental impact on performance and ROI. A qualified partner can point out proven best practices for cloud computing, and help you benefit from the lessons they've learned along the way.

For example, there may be times when data transfer can be greatly expedited by shipping data physically, via secure external drives. Or you can keep your ongoing costs under control by knowing which functions to outsource and which to keep in house. In every area, from planning, to development, to execution, a capable partner can help you navigate the finer points of cloud computing, avoid common pitfalls, and avoid unnecessary expenditures of time, money, and manpower.

5 MAKE SURE YOU CHOOSE THE RIGHT ENVIRONMENT FOR YOU.

When a company initially considers making the transition to cloud computing, four distinct options come to mind.

The one which provides the “ideal balance” of security, customization, access, and affordability can vary from one industry or company to the next, depending upon their needs. It’s important to find the environment that is the best fit for your organization. Each option comes with its specific set of benefits — and some come with considerable drawbacks.

HOW DO YOU CHOOSE THE RIGHT ENVIRONMENT?

There are typically four directions that companies explore when considering their options for a cloud computing environment. Trying to create an on-premises or private cloud is by far the most complex undertaking; it requires large up-front investment, as well as considerable ongoing internal IT costs. For this reason, it is typically used by large organizations that have very unique requirements which prevent them from utilizing the alternatives to on-premises.

For the most part, companies that want to leverage cloud computing to reduce costs and improve efficiencies turn to solutions that are based on one of three models: SaaS, PaaS, and IaaS.

On-Premises Private Cloud	SaaS	PaaS	IaaS
Applications	Applications	Applications	Applications
Data	Data	Data	Data
Runtime	Runtime	Runtime	Runtime
Middleware	Middleware	Middleware	Middleware
O/S	O/S	O/S	O/S
Virtualization	Virtualization	Virtualization	Virtualization
Servers	Servers	Servers	Servers
Storage	Storage	Storage	Storage
Networking	Networking	Networking	Networking
You Manage		Other Manages	

SaaS

SaaS enables firms to outsource most, if not all, of their cloud environment functions. It enables data and applications to be managed and hosted via a single, central, offsite location. Users can access what they need over the internet and are not responsible for hardware or software updates. While the benefits are considerable, there are also serious drawbacks:

- Little or no opportunity for customization or control
- Vendor lock-in
- Lack of interoperability and integration support
- Possible issues surrounding security, compliance, and downtime

Many companies who opt for a SaaS approach mistakenly choose the familiarity of one of the Big Three providers. Additionally, many of the firms who position themselves as SaaS providers simply provide a software solution and use the Big Three providers for infrastructure or platform support. While this may enable an easier migration to the cloud, it also limits their ability to generate cost savings.

PaaS

PaaS is a strong option for developers and organizations that want control over application development and hosting, and place a high priority on simplified app deployment. It's also simple, scalable, and highly available. However, it's important to note that not all PaaS providers offer the same set of tools and features. Users may also experience some of the limitations found in SaaS, including:

- Issues involving security and integration
- Vendor lock-in
- Run time and operational limitations

IaaS

IaaS is the most flexible of cloud computing models. It enables users to avoid large, up-front infrastructure costs and ongoing infrastructure management. It delivers servers, network, operating systems, storage, and other infrastructure through virtualization technology. It's highly scalable, so clients can retain control of their infrastructure, and additional resources can be retained when needed. Limitations include:

- Security issues that might arise from a multi-tenant environment and virtual machines
- Possible need for internal staffing and training

Each of these models offers a specific set of benefits and limitations. In the final analysis, the "best solution" can only be defined as the one that is best for you organization. To find that, you may want to carefully consider the degree of flexibility, agility, customization, and service that your provider offers.

At CloudKey, we set out to build those attributes into our core business model. The result was the creation of CloudKey Builder, an interactive configuration engine that enables clients to control the scope, capabilities, and cost of their cloud computing environment by choosing the parameters that are right for them.

The CloudKey Approach to Cloud Computing

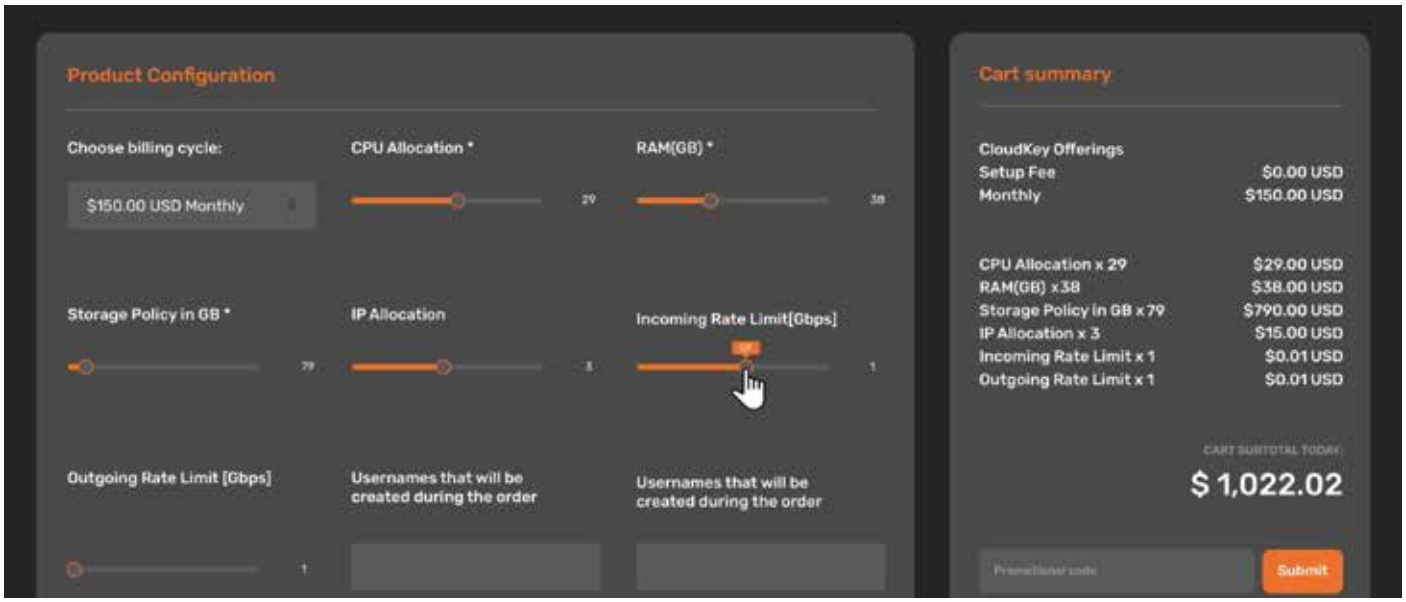
While many cloud computing providers set specific boundaries around the capabilities and services they bring to each engagement, we set out to provide a superior level of customization and flexibility that enables the client to “right size” their cloud computing environment.

“With the CloudKey Platform, we provide offsite virtual private cloud services to companies that typically range in size from 25 to 2,500 users. Our ‘white glove’ level of service provides an exceptional level of support and guidance, both pre- and post-migration. We bring to the table a proven background in data center operations, combined with an understanding of the value that clients want.”

Jonathan Pike
VP of Managed Services

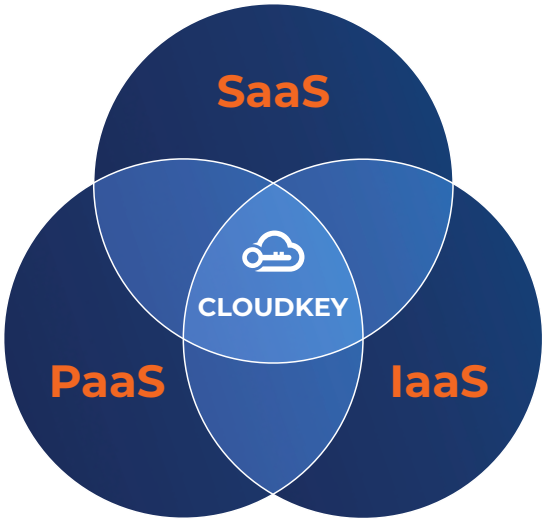
At that heart of our approach is CloudKey Builder, an interactive online tool that enables clients to design their own cloud by selecting a range of criteria in over a dozen different areas, including:

- Network size
- Number of VPN users
- Operating systems
- Memory
- Storage capacity
- Data replication needs
- Data retention



While the CloudKey Platform does offer three standard preconfigured packages, the proprietary CloudKey Builder tool lets customers design a cloud ecosystem to their exact specification, so they pay only for what they need, and nothing more.

Additionally, CloudKey Builder enables users to create different scenarios – and to immediately see how each choice impacts ongoing rates, based on the criteria they've entered. Users can also create scenarios based on future anticipated demand, so that they can predict future cloud costs if they decide to scale up or down.



CloudKey Builder is fundamentally an IaaS approach to cloud computing that enables the clients to avoid large up-front infrastructure and hardware costs. However, we also offer the expertise and capabilities normally associated with PaaS and SaaS providers, so organizations can design a truly customized solution. And, unlike many direct competitors, CloudKey maintains its own infrastructure and platform, rather than simply acting as a conduit for the large cloud services providers.

Our goal is to provide a turnkey, highly available, and cost-effective cloud computing environment that helps customers reduce their cloud costs by 20-50%, compared to large cloud services providers. We do this by giving customers access to:

- Strategic and IT consulting services
- A results-driven approach that focuses on both value and performance
- Proven cloud environment expertise
- Best-in-class cloud infrastructure and solutions
- Insightful pre-migration consultation
- Ongoing post-migration support

By avoiding the "one size fits all" approach of public cloud computing, we're able to generate considerable cost savings without sacrificing technical capabilities. The CloudKey Platform enables customers to tap into some of the most robust and advanced solutions in the industry, including:

Cloudflare

Cloudflare provides state-of-the-art solutions for cloud cybersecurity and DDoS mitigation services. Used by an estimated 20% of the internet for web security services, Cloudflare safeguards the CloudKey network from cyberattacks and other potential threats.

SentinelOne Vigilance

SentinelOne Vigilance provides 24/7 Managed Detection and Response that can be delivered in milliseconds to shut down attacks and reduce dwell time to near zero. Features include alert, kill, quarantine, remediate unwanted changes, network containment, and more.

MFA and SSO

We support modern MFA and SSO solutions that integrate seamlessly with our cloud environment. This ensures secure, streamlined access for users without adding friction to their daily workflows.

IBM Flash Storage

The industry's most trusted data platform, IBM FlashSystem, powered by IBM Spectrum VirtualizeTM meets your most demanding application needs with 60% reduction in admin efforts, 43% increase in storage cost efficiency, and 99.9999% uptime.

Dell PowerEdge Servers for Compute

Paired with the OpenManage integrated IT management system, PowerEdge rack servers include Dell's most powerful automation and reporting features yet — freeing users to spend less time on systems admin tasks and focus more on higher priorities.

Palo Alto Firewalls and Edge Security Services

This advanced protection leverages threat intelligence from over 85,000 global customers to detect and stop known, unknown, and zero-day threats—up to 180 times faster than traditional solutions.

Arista Carrier Grade Switching

Arista Data Center Switches deliver efficient, reliable, high performance Cloud Network Infrastructure and Architectures on 40GbE – 100GbE switching platforms.

Zerto Real Time Replication

Zerto delivers continuous data protection with real-time replication and journal-based recovery, enabling near-zero data loss and rapid recovery from outages, ransomware, or user error.

VMWare Enterprise Virtualization

VMware delivers a proven, enterprise-grade virtualization platform that maximizes resource efficiency, simplifies IT management, and ensures high availability across workloads—on-premises or in the cloud.

Learn More

Your migration to the cloud doesn't have to come with sky-high costs. With the right planning, strategy, and expertise, you can manage costs and reduce your overall IT expenses.

To learn more about how you can help bring the cost of cloud computing back down to Earth, contact us at sales@cloudkey.io to arrange a complimentary consultation.