Cloud Repatriation Offers Significant Savings

Businesses can cut costs by optimizing workload placement

Executive summary

Of the many reasons to migrate workload placement off the public cloud, cost is a major consideration. Despite its reputation, the public cloud may be more expensive than an on-premise or private cloud solution—under a variety of use cases. Much of this has to do with unrealistic expectations about the amount of data companies collect, upload, store, and analyze. Another cause is running apps not architected for the public cloud, resulting in far more bandwidth consumption than anticipated.

With the complex cost structures built into the public cloud business model, companies are seeking third-party advice in evaluating their workload placement and making changes to achieve savings goals. In fact, 80 percent of customers surveyed report they are migrating applications or data from the public cloud to a private cloud or on-premise environment.[1] Another report showed that 41 percent of IT decision-makers feel that the costs of their private cloud implementation are less than that of an equivalent public cloud environment.[2]

At issue

To develop an optimal workload placement strategy, it's critical to perform a comprehensive investigation of all options and to avoid preconceived ideas when it comes to cost.

At first glance, the public cloud appears to offer great savings, but that may not take every variable into account. The menu of public cloud pricing options can change depending on the type or types of storage tiers a customer uses. For instance, the same activity under one tier can cost far more under another.

Bulk egress and bandwidth fees as well as data transfer charges are complicated to predict. And calculating data transfer costs can be difficult depending on a number of factors. Some public cloud infrastructures will change these costs depending on where the data is stored and where it's transferred. Costs can also vary if the data is transferred within or across regions. All of this makes it difficult to estimate costs, especially for an organization that does business around the world.

Costs per operation is another matter. They may look insignificant, but USD 0.05 per 1,000 operations will add up fast when there are large object counts or transaction rates. In other words, the volume of email, event logs, and IoT workloads can result in hundreds of millions if not billions of objects, and this is where activity costs can soar.

Many are also surprised at the high cost of running an app not architected and optimized for the public cloud or the amount that apps get used or how much data growth a company will experience. Suddenly the idea of "pay just for what you use" exceeds all expectations. This is especially true when running reports and exporting all the data.

When looking at the total cost of ownership (TCO), a different picture may emerge. In order to gain significant cost benefits through a private cloud or on-premise strategy, it's worth engaging experts from SHI to conduct an analysis. That will help you make decisions based on:

- Costs of deployment in the public cloud, both initial and ongoing
- The costs to increase storage in a public cloud for an app workload compared with those of a private cloud or an on-premise solution
- Opportunities for saving by taking advantage of a combination of private cloud and on-premise deployment

Rethinking on-premise and private cloud

The industry has changed over the past year, which can make an on-premise or private cloud solution more affordable—for example, lower costs for CPU and memory.

Other reasons tend to be operational, such as selecting the right type of storage. Archived data—such as those used for litigation discovery, governance audits, fraud investigations, and historical trending—requires constant access and results in high costs if stored on the public cloud.

And while many companies had long ago invested in their own data centers, that infrastructure doesn't go away just because they migrate workloads to the public cloud. The cost and upkeep remain. When companies understand how to maximize the value of their data center, they can achieve overall savings.
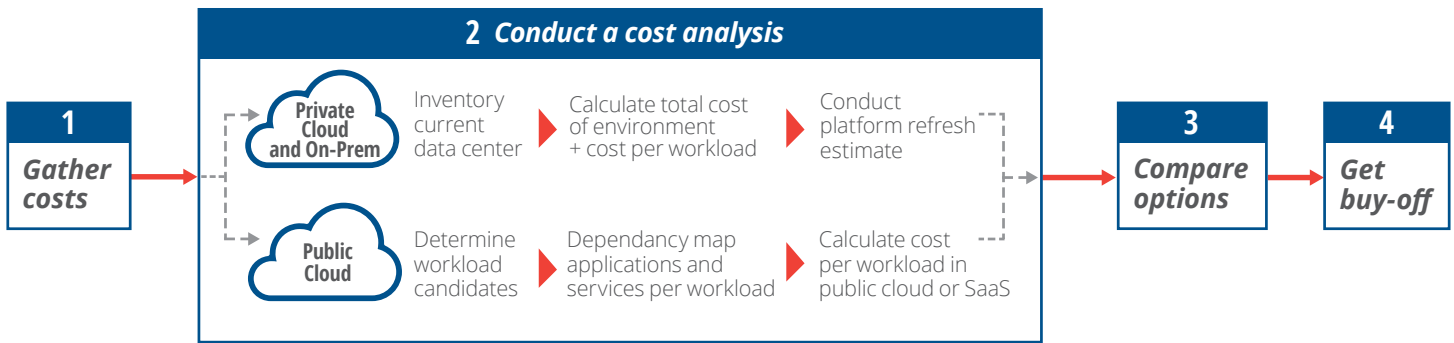
How SHI delivers value

SHI brings an agnostic point of view to both public and private cloud practices. Through SHI's guidance, businesses can optimize their workload placement, using a mix of public and private cloud and on-premise solutions. To do this requires a thorough evaluation, accurate real-world system and application data, and an assessment tool to perform a cost/benefit analysis.

Savings in the real world

A large telecom approached SHI for an evaluation of its public cloud workloads. Our analysts uncovered that the company had placed a nonoptimized version of an app on the public cloud. Compounding the issue was that this app received a higher level of use than expected. This resulted in bandwidth costs greatly exceeding its budget.

The company had two options: rearchitect the app or move it to an on-premise solution. From a cost-savings perspective, the latter choice proved to be appropriate, as this action cut what the business had been spending by over 30 percent.

Other companies in this and other sectors have had similar experiences.

2 Conduct a cost analysis

1 Gather costs

Private Cloud and On-Prem
- Inventory current data center → Calculate total cost of environment + cost per workload → Conduct platform refresh estimate

Public Cloud
- Determine workload candidates → Dependancy map applications and services per workload → Calculate cost per workload in public cloud or SaaS

3 Compare options

4 Get buy-off

Evaluation process

By using a framework, like the one shown above, we can demonstrate to a business the costs of both on- and off-premise options. In this way, IT can understand the expenditures related to a group of applications and services when using public and private cloud and on-premise platforms. With this information, we can help a business establish an optimum mix of workload allocations.

Conclusion

A way to avoid public cloud cost overruns is to think of the cloud (public and private) as a compute model. With that in mind, businesses can match specific types of workloads to the lowest cost placement. Fortunately, companies do not need to fully commit to either an on-premise or off-premise solution. Instead, business leaders that consult with SHI's Cloud and Innovative Solutions team can develop a plan to become more strategic in their workload placement selection.

With SHI's agnostic viewpoint toward both public and private clouds, companies can achieve the best of both worlds. And the resources saved can be allocated to more profitable activities and investments. We help our customers achieve these goals every day. Speak with the SHI team to begin understanding how to save money through workload placement.

About SHI

From software and hardware procurement to deployment planning, configuration, data center optimization, IT asset management, and cloud computing, SHI offers custom IT solutions for every aspect of your environment.

SHI's goal is to foster long-term and mutually beneficial relationships with our customers and partners, every single day. The expertise, dedication, and commitment to excellence of each member of your SHI account team (and the support organization that backs them) have made SHI into the industry-leading, complete IT solution provider we are today.

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Cloud and Innovative Solutions (CIS) Team

With a combination of experience and technical expertise, SHI's CIS team delivers services that optimize the business and IT benefits of public, private, and hybrid cloud technologies. They use a proven methodology to assess, design, build, and manage the cloud solutions needed to address customers' digital transformation needs. They offer a range of solution offerings including cloud spend optimization, infrastructure and application modernization, and workload migration.

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Customer Innovation Center

Located at SHI's New Jersey world headquarters, the 8,000-square-foot Customer Innovation Center is designed to help organizations test new solutions, accelerate the adoption of emerging technologies, and build capabilities that facilitate strategic transformation. Take advantage of the state-of-the-art labs, workshops, training, and industry-leading technologies to test how a data warehousing solution will work in your environment. SHI can help you simulate current conditions, as well as the impact of new equipment or upgrades.

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Ridge Integration Center

Located less than five miles from SHI's world headquarters, this 400,000-square-foot facility is SHI's largest integration and configuration center. Specifically designed to support and build custom data center solutions, Ridge Integration Center features state-of-the-art equipment and certified experts to help organizations address complex and unique data center needs.

Learn more

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For more information about SHI, please visit **shi.com**.

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3. https://blog.hubstor.net/avoid-cloud-storage-costs-pricing-model.
4. SHI customer data.