



# THE HIDDEN COSTS OF MOVING TO THE CLOUD

A cloud migration is never a straightforward process. Without the proper mindset or technical understanding, an organization can easily wander into a situation that could put it thousands or even millions of dollars over budget.

Fortunately, there are various strategies available to lower unexpected or hidden costs of cloud computing. This can begin with expertise to support the development of a cloud strategy and the personnel to either handle the migration process or augment and support in-house IT teams.

Organizations can take the following steps to avoid the hidden costs of the cloud:



## PRE-MIGRATION

### Create a Cloud Governance Framework

This framework ensures that all enterprise expenditures related to cloud are aligned with business objectives, promote data integrity across the enterprise, encourage innovation and mitigate the risk of data loss or non-compliance with regulations. The framework should align with existing standards implemented (e.g. TOGAF, COBIT, ITIL, ISO, etc.)

### Software Licensing Fees, Support and Administration

When determining what workloads should move to the cloud, organizations can overlook the importance of a thorough review of all their software licensing agreements. This review is meant to ensure that – before the migration begins – the costs of current software do not increase if the system is moved to the cloud.

### Application Mapping

Knowing what to move to the cloud is one of the fundamental cost optimization tactics. Every application requires application dependency mapping, which is very time- and labor-intensive when done manually.

### Business Cases

Beyond the technical costs, there are more strategic considerations that will affect the real-world cost of a cloud computing project. One mistake easily made is not to produce a firm business model in advance. Organizations sometimes say that they haven't recouped their expected savings after a cloud migration, but in many cases, they haven't highlighted cost reduction as a primary objective.

### Application Refactoring

Not all chosen applications can be simply shifted to the cloud and require careful planning to ensure they are cloud-ready. Many will require refactoring which is a highly labor-intensive process that requires time, manpower and expertise if done manually. All of this adds untold costs that grow with each additional application, especially with larger organizations that have hundreds if not thousands of applications.

### Data Transfer Charges

Data transfer charges often come as a major shock to new cloud customers when they receive their first monthly bill. Transferring data into the cloud is generally free. But transferring it out is another matter.

Outbound transfer charges vary from region to region and vendor to vendor. So, when choosing a vendor and where to host your data, you'll need to strike the right balance between cost and proximity to the consumers of the data.

In addition, you should consider offloading the work of transferring traffic to your vendor's content delivery network. Not only can this potentially reduce overall data transfer costs, but will also speed up delivery of your data.



## MIGRATION

### Manual Migration or Scripting

In the refactoring process, the need to use customized scripts can be time-consuming for a single application and can grow exponentially with each additional application. Once again, the time and personnel involved will bring increasing costs that will be difficult to pinpoint before starting.

Scripting mistakes can be easily missed and not become apparent until the testing and validation phase. This means rolling back the migration and taking the additional time to find the scripting error, correct it, and move forward in the migration process again.

### Over and Under Provisioning

The process of matching instances to workloads is complex. Organizations can over-provision the instance size of the workload, which leads to unnecessary additional costs or under-provision, which can mean that the workload will not work properly.

### Deduplication of Data

Organizations pay for the storage they use. With the exploding volumes of data, data deduplication enables better utilization of both storage devices and network bandwidth. Costs will be mitigated on both storage usage and data transfers by embracing data by deduplication.

### Cutover & Testing

The cutover and testing phase can present hidden costs that can come from a number of angles, all to do with time. An ill-timed process can cost business productivity, which can have serious financial ramifications. It can also uncover problems where applications are not operating properly. Both take expertise and personnel time, which ultimately lengthens the migration process and adds more hidden costs.

### Optimization

Applications and workloads never remain static as they change and grow with the organization. These changes require ongoing optimization to ensure that applications continue to operate at peak efficiency. Without this optimization process, or if it is done incorrectly, applications can stop working, bringing things to a halt for the organization. The costs won't be clear until it's over – but the longer it takes to correct, the more it costs.

### Decommission Cloud Services

**Unused Instances:** Quick and easy resource provisioning is one of the key advantages of on-demand, pay-as-you-go cloud computing. But with this convenience comes a cost. In the same way it's easy to spin up cloud instances, it's just as easy to forget about them. This makes it critical for organizations to keep track of all instances. That way, unused machines can be identified and shut down, and unnecessary costs can be avoided.

## CONCLUSION

The debate regarding “cloud computing vs. data centers” is now a moot point for most organizations today as the hybrid model has become the standard of business agility. While the public cloud is not right for every workload, it will continue to be a cornerstone of the hybrid model. Organizations both large and small can create a cloud strategy that serves them well today and tomorrow while reducing cost as advertised and as expected.

**Unhealthy Cloud Services:** Unhealthy instances that go unnoticed don't just waste money, but also undermine the performance of your applications. Make sure to put processes in place to identify unresponsive instances and replace them with healthy ones.

**Orphaned Storage, Volumes and Snapshots:** Whenever you terminate an instance, you need to deal with unattached volumes and any orphaned volumes and snapshots. With most major cloud vendors, your attached storage or snapshots are not automatically deleted when you terminate your virtual machine. Ensure proper deletion of these unused data volumes and snapshots is completed in order to avoid unnecessary costs.

**Underutilized Discounted Capacity:** Most cloud vendors provide discount plans on pre-booked capacity, which potentially offer significant savings over on-demand pricing in exchange for a payment commitment over a fixed term.

To maximize your discount, you need to make full use of the credit throughout the entire term. That means making sure matching instances, which are entitled to the credit, consume it as much as possible.

### FOR MORE INFORMATION:



**Peter Caltacci**

Director, Dallas  
+1 214 438 1212  
pcaltacci@alvarezandmarsal.com



**Art Barrios**

Managing Director, New York  
+1 646 709 6336  
abarrios@alvarezandmarsal.com



**Jean Hill**

Managing Director, New York  
+1 212 328 8555  
jean.hill@alvarezandmarsal.com

## ABOUT ALVAREZ & MARSAL

Companies, investors and government entities around the world turn to Alvarez & Marsal (A&M) when conventional approaches are not enough to make change and achieve results. Privately held since its founding in 1983, A&M is a leading global professional services firm that provides advisory, business performance improvement and turnaround management services.

With over 3000 people across four continents, we deliver tangible results for corporates, boards, private equity firms, law firms and government agencies facing complex challenges. Our senior leaders, and their teams, help organizations transform operations, catapult growth and accelerate results through decisive action. Comprised of experienced operators, world-class consultants, former regulators and industry authorities, A&M leverages its restructuring heritage to turn change into a strategic business asset, manage risk and unlock value at every stage of growth.

Follow us on:



To learn more, visit: [www.alvarezandmarsal.com](http://www.alvarezandmarsal.com)