

Optimize Cloud Costs Through Governance and Collaboration

An ENTERPRISE MANAGEMENT ASSOCIATES® (EMA™) White Paper
Prepared for RightScale

March 2017



*IT & DATA MANAGEMENT RESEARCH,
INDUSTRY ANALYSIS & CONSULTING*

Optimize Cloud Costs Through Governance and Collaboration

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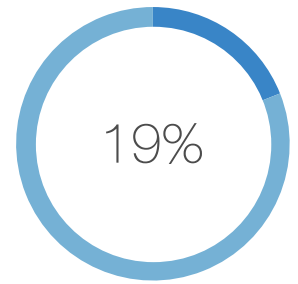
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Expanding Multi-cloud Adoption Fuels Complexity

Enterprise Management Associates' (EMA's) research¹ shows significant growth in both private and public cloud in 2017, with enterprises planning to move an additional 19 percent of their applications to public clouds and another 10 percent to private cloud platforms. To accommodate technical workload requirements, as well as for security, compliance, and financial considerations, enterprises are increasingly adopting multiple cloud platforms. An approximate 35 percent of enterprise customers harness four or more public cloud offerings to complement their existing private clouds (see Chart 1).



APPS MOVING TO PUBLIC CLOUD IN 2017

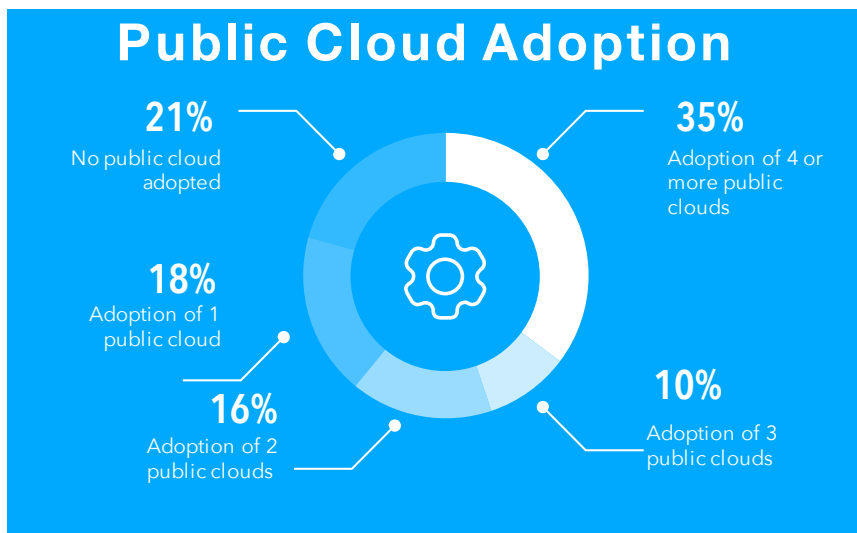


Chart 1 - EMA Research 2017 Cloud Adoption Metrics

Lack of Governance and Collaboration

For many enterprises, rapid organic cloud adoption resulted in unclear responsibilities and a general lack of collaboration among corporate IT and finance teams. Application teams and business units that own the corporate cloud resources were also affected by this absence of centralized governance and control. This resulted in three key problems: waste of cloud resources, unpredictable cloud bills, and cloud vendor lock-in.

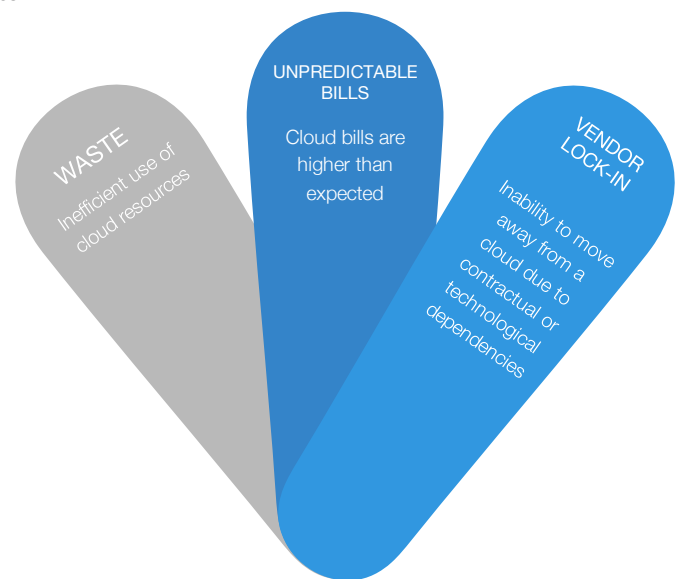


Chart 2 - Symptoms of lack of Governance and Collaboration

¹ "TCO, ROI, and Customer Pain Points of Hybrid Cloud and the Software-defined Data Center," EMA, March 2017

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Waste

EMA research shows 40-50 percent² of cloud CAPEX and OPEX are wasted. The following key issues led to this waste:

- **Unused VMs and storage:** Typically, 30 percent³ of VMs are idle. This includes environments for proof of concept, demos that are no longer needed, outdated snapshots, and abandoned development environments. Storage volumes belonging to these environments are often not deprovisioned.
- **Running all VMs 24x7:** VMs that are designated to specific temporary tasks are not powered down during longer periods of inactivity. Examples are development environments that are only needed during the workweek, batch jobs that run for a few hours once a week, or additional e-commerce capacity that is required during major peak times.
- **Oversized VMs:** Because IT teams often cannot predict application resource requirements for consistent performance and optimal reliability, they lean toward selecting “too large” VM instance sizes as an “insurance policy.” These VMs are not downsized based on usage metrics.
- **Disadvantageous financial choices:** Customers are often not familiar with cloud discounting options, such as AWS Reserved Instances or Google Committed Use Discounts, and do not understand the cost differentials from placing workloads in higher-priced cloud regions.
- **Suboptimal application placement:** When workload performance requirements are only partially known, enterprises cannot make a fully informed decision in terms of where to place an application. For example, depending on performance requirements and access frequency, Amazon EC2, IBM Softlayer, or Microsoft Azure could be the most cost-effective cloud vendor.

Unpredictable Bills

A combination of ungoverned cloud usage, insufficiently understood application performance patterns, and complex cloud vendor pricing models left many enterprises unable to predict their monthly cloud bills. Forgetting to shut down temporary resources, accidentally selecting expensive VM instances, and unexpectedly using costly storage IOPS over sustained periods of time are some of the reasons for surprisingly high monthly invoices. Inaccurate forecasting, a lack of accountability for cloud budgets, and the inability to detect cost overruns before they grow large all compound these issues.

Vendor Lock-in

Cloud providers offer additional services (container management, database services, server-less computing, etc.) that complement their basic compute, storage, and network infrastructure offerings. These services provide added value, but can also lock customers into a vendor-specific environment. In addition, payment obligations caused by contracts that were originally signed to gain a more favorable, long-term cost structure enhance the issue of application gravity.

² “TCO, ROI, and Customer Pain Points of Hybrid Cloud and the Software-defined Data Center,” EMA, March 2017

³ Ibid.

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Root Causes Preventing Cloud Cost Optimization

A lack of governance and collaboration causes symptoms such as waste, unpredictable cloud bills, and cloud vendor lock-in due to the rapid organic growth of public cloud adoption. Business units initiated many cloud projects without allowing corporate IT to incorporate consistent deployment, management, and governance policies. This general lack of central oversight led to insufficient cost control because the individual development groups were not able to fully evaluate the pricing models of each potential cloud option, nor did they have the knowledge of other corporate cloud investments to help them negotiate the most favorable contract terms. Not working with corporate purchasing also made it more difficult to track contractual details to reserve capacity, such as renewal dates, variable cost components, and different options. These inefficiencies increase with a larger enterprise size and a higher number of business units.

Cloud Cost Control is the Top Priority Today

Despite nearly half of enterprises (48%⁴) having a centralized cloud operations team in place, cost overruns made it all the way to the number one spot of hybrid cloud-related pain points in 2017, with other cost-related topics also high up on the list of priorities (see Chart 3).

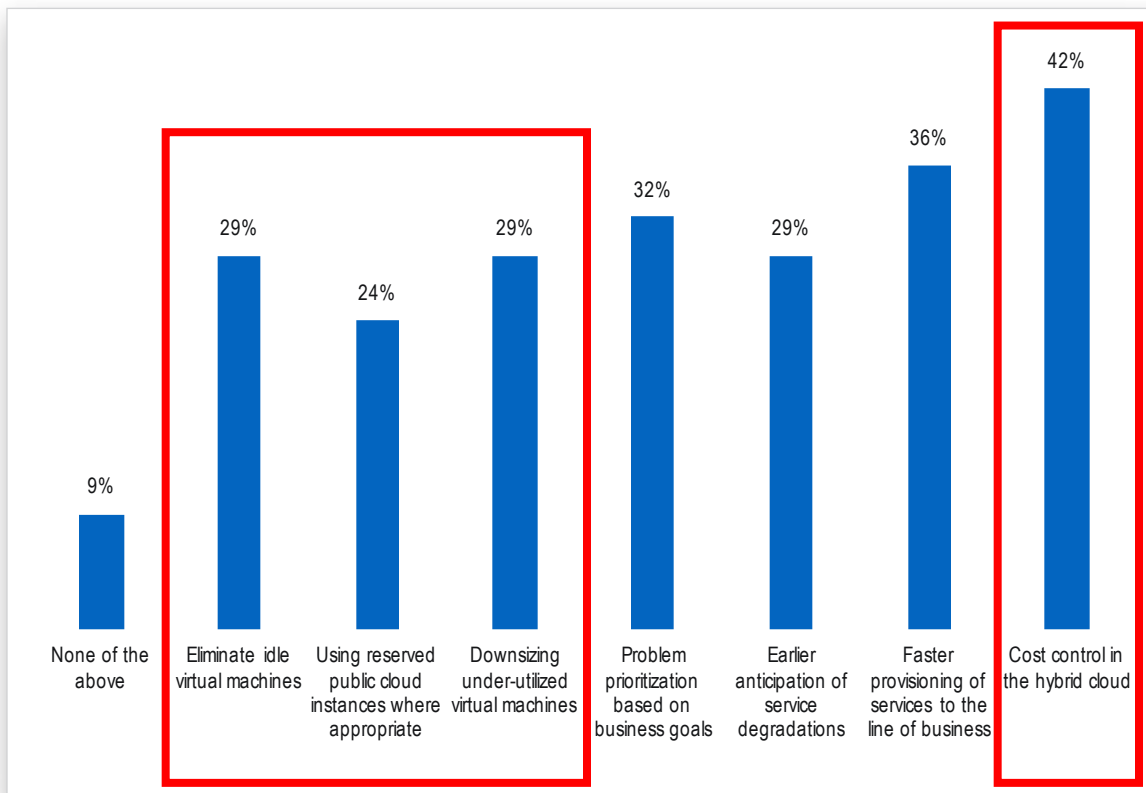


Chart 3 - Key 2017 Cloud Priorities

⁴ "TCO, ROI, and Customer Pain Points of Hybrid Cloud and the Software-defined Data Center," EMA, March 2017

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The Remedy: Collaborative Cost Optimization

Implementing cloud cost control is a two-step process. First, the organization should define roles and responsibilities for central IT, finance teams, and cloud resource owners in the business units. The implementation of a collaborative cost management platform to efficiently and continuously control and optimize cost without slowing down the business comes next.

Step 1: Define Roles in Cloud Cost Governance

To achieve hybrid cloud cost optimization, enterprises must first provide a transparent framework for defining roles and enabling effective collaboration among the following stakeholders:

- **Central IT:** The corporate IT department should establish cost management policies and processes, and provide live reports and continuous cost optimization guidance to business owners. Central IT must also support the business units in reducing costs by optimally leveraging each cloud provider's cost model and leveraging the company's aggregated purchasing power to achieve more favorable pricing.
- **Business Units:** Application teams and development groups should be responsible for their own cloud costs. They can leverage recommendations, tools, and real-time cost information provided by central IT, and provide feedback that enables central IT to further optimize cost control policies.
- **Finance Teams:** The finance and procurement organization's role includes contract negotiations, budget setting, and cost reporting to provide the data needed to plan and track costs.

Step 2: Implement a Cloud Cost Management and Optimization Platform

In addition to the clear assignment of cloud cost management responsibilities, enterprises need a software platform that facilitates communication and collaboration among their defined roles. EMA research shows that organizations are aware of this requirement and identify "Collaboration" as the most significant area for cost savings (see Chart 4).

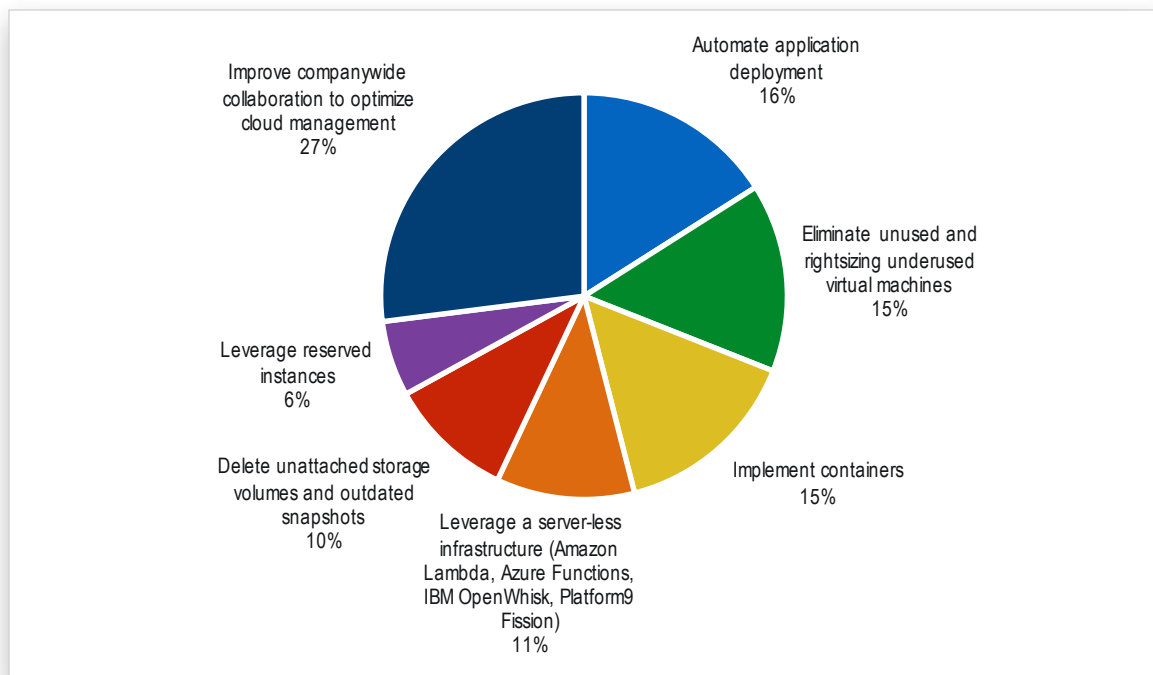


Chart 4 – Potential for Significant Cost Savings

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RightScale Optima is a collaboration-based cost management and optimization platform that includes the following core components:

- **Centralized cost analytics dashboard** with role-based access (and drill-down capabilities) to provide real-time cost information for development groups, business units, and IT operations.
- **Showback and chargeback reporting** that enables the organization to allocate costs to the appropriate groups.
- **Noise reduction** capabilities that allow end users to flag unsuitable recommendations to improve the algorithm for the entire enterprise.
- **Automated actions** that enable resource owners to easily eliminate waste by shutting down unused resources, or adjusting resources to take advantage of lower prices or discounts.
- **Collaboration capabilities** for sharing feedback and tracking progress against cost savings goals.
- **Ongoing policy enforcement** that helps to alert users of waste or violations of corporate policies and take automated steps to remediate the issue.
- **Optimization scoreboards** that track progress on optimization and enable users to learn from “how other groups do things.”
- **Centralized recommendations for optimization.**
 - Identify underutilized resources and earmark them for downsizing
 - Identify zombie VMs, old snapshots, and unattached volumes
 - Schedule the shutdown of resources used periodically, such as development VMs or the extra infrastructure needed only for one-time or seasonal promotions such as Black Friday
 - Identify resources that can be moved to a more cost-efficient server region or instance type
 - Optimize discounts through central purchasing and management of reserved instances

EMA Perspective

As enterprises feel the pressure to minimize cost overruns and limit security and compliance risks in public cloud, all without slowing down the speed of innovation in their business units, they require a tool that ties together central IT, the finance and purchasing groups, and development organizations in business units. This cost management and optimization tool must facilitate communication and collaboration among these groups, while institutionalizing responsibilities and workflows. EMA recently named RightScale as an EMA Innovator of Amazon Re:Invent 2016 largely because RightScale is leveraging its decade of experience in multi-cloud management and automation to help organizations gain visibility and collaborate on cloud spending.

In the end, business owners need real-time cost control and benefit from the expertise and negotiating power of the entire corporation. The optimal cloud cost optimization platform facilitates the required governance process while rapidly providing developers with the resources they need, but without the downsides of acquiring these resources in an ad hoc project-by-project manner.

About Enterprise Management Associates, Inc.

Founded in 1996, Enterprise Management Associates (EMA) is a leading industry analyst firm that provides deep insight across the full spectrum of IT and data management technologies. EMA analysts leverage a unique combination of practical experience, insight into industry best practices, and in-depth knowledge of current and planned vendor solutions to help EMA's clients achieve their goals. Learn more about EMA research, analysis, and consulting services for enterprise line of business users, IT professionals, and IT vendors at www.enterprisemanagement.com or blogs.enterprisemanagement.com. You can also follow EMA on [Twitter](#), [Facebook](#), or [LinkedIn](#).

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