

STEP-BY-STEP GUIDE FOR CLOUD COST OPTIMIZATION





Have you noticed any spikes in your cloud bills lately? Exhausting your budget and giving you sleepless nights. Are you also struggling with cloud costs and can't figure out the leaks? If yes, then it's time for 'cloud cost optimization'.

“Through 2020, 80% of organizations will overshoot their cloud IaaS budgets due to a lack of cost optimization approaches”

~ Source : Gartner

Did you know! The State of the Cloud 2018 report states that cloud users are wasting more than 35% (at an average) of their total spend. The survey also suggests that 58% of cloud users cite cost saving as the top focus. Keeping all of this in mind

Here is a step-by-step guide for you to manage your bewildering cloud cost

UNDERSTAND CLOUD COSTS

If you are planning to migrate on cloud, you need to be aware of all the factors affecting cloud cost.



Cost evaluation before migration

It is a strategic factor i.e. it depends how well you curate strategy. You need to make a cloud adoption strategy to plan and assess your cloud requirements. This will lead you to forecast the cloud spend and let you be prepared



Understanding cloud vendors' billing mode

You need to make sure that you are certain about which service to use. Then analyze, compare and determine which cloud vendor is providing service that you require at less price. The thorough understanding of region-wise cost, service-wise cost affects cloud cost at a significant level. You can also avoid vendor lock-in by selecting the right cloud at the initial stage of cloud adoption.



Regular Monitoring

Cloud cost optimization is a continuous process and even after adopting cloud as technological update you need to regularly keep a check on your cloud infrastructure. Cloud vendors provide pay as you go services, when these services are running without any requirements, then the cost spikes up. This makes regular monitoring an important factor for cloud cost optimization.

TRACK THE WASTAGE

Before diving into steps to reduce cloud cost, you need to categorize and find the resources to ultimately make a checklist for the resources to be kept and eliminate the rest in order to reduce wastage.



ORPHANED RESOURCES

Resources associated with terminated VMs, if left running and unattended to immediately, can incur unnecessary costs and are therefore called orphaned resources.

Types	Orphaned Snapshots	Orphaned Volumes	Unassociated IPs	Load Balancers	Unused Machine Images	Orphaned Object Storage
Where to look for?	Snapshots of the data that is no longer required	Amazon EBS, Azure Virtual Disks, Block Storage in GCP	Elastic IPs in AWS, Static Public IPs in Azure, Static External IP addresses in GCP	Identify the load balancers with no instances	AMIs in AWS, images in GCP	S3 buckets in AWS, Azure Blob Storage, Google Cloud Storage

OVERPROVISIONED RESOURCES

If you are spending on the resources which are larger in size than is actually required, you are falling for overprovisioned resources. You might end up selecting the maximum size of a resource by default or your requirements have changed. Identify such resources as soon as possible.

Types	Underutilized Instances	Underutilized Volumes	Underutilized Database Warehouses	Underutilized Relational Databases
Where to look for?	Amazon EC2, Azure Virtual Machines, Google Compute Engine	Amazon EBS, Azure Virtual Disks, Block Storage in GCP	Amazon Redshift, Google Cloud Datastore, Microsoft Azure SQL Data Warehouse	Amazon RDS, Azure SQL, Google Cloud SQL

IDLE RESOURCES

If a resource is needed only between a certain time frame but is left running throughout for 24X7 or a resource that is no longer needed but continuously running accounts for idle resources

Types	Idle Instances	Idle Load Balancers	Idle Relational Databases	Idle Scale Groups
Where to look for?	Amazon EC2, Azure Virtual Machines, Google Compute Engine	Look for load balancers with no instances or with instances that run 24X7 unnecessarily	Amazon RDS, Azure SQL, Google Cloud SQL	Auto Scaling Groups in AWS, Azure Scale Sets, Google Scale Groups

RESERVED CAPACITY

Wastage that can occur	Expired RIs	Unused RIs
How to prevent it?	Renew or dump the RIs and review regularly	See previous months' RIs usage and if unused, you can sell it at cloud vendors' marketplace

The biggest challenge faced by enterprises on cloud is the optimum utilization of their services due to the mismanagement of cloud cost. As mentioned earlier, cloud cost optimization is a continuous process.

The following steps can guarantee cost cutting in your cloud bills instantly:

Identify the resources

You need to identify each and every resource and look for its ownership. Firstly, it will help you to layout the entire usage of resources. Second, Identifying the owner of that particular resource can show who is spending more and can be controlled strategically. Tagging is the best practice to identify resources without any hustle and confusion.





Make visibility compulsory to every user

Every user in the organization should be aware of all their resources in use. The visibility should be in terms of the running as well as the reserved resources. This will prevent unnecessary spinning of instances and usage of other services.

Set the budget for each account

Now with the help of the two steps mentioned above, you can track actual usage. So, go ahead and set a realistic budget for each account based on those actual usages. This will automatically forecast your cloud budget



Whitelist your resources

Allow only those resources that are required for your cloud environment. For example, you can whitelist your instances to allow only specific types (like t2.medium) of instances or only specific sizes (like micro, small, medium). This helps you spend only on required resources and also prohibit unapproved resources in your cloud.

| Reserved Instances

You can reserve instances based on your forecasting or usage. This is a highly recommended approach to significantly reduce cloud cost by 40% as compared to On-demand instances. This is because generally, you get notable discounts on reserved instances.



| Scheduling |

Shutting down spinning instances when not in use can help you save more than 70%. The user should get used to this practice. Check which instances need 24X7 availability and rest can be scheduled; for example, you can schedule the shut-down of resources on non-working days.

| Regularly check regions in which your workload is running

Do you know, the cost of cloud services per region can vary up to 60%. So, you need to justify the region in which your workload is running. Region wise understanding of prices can help you opt for less expensive options.





Storage Lifecycle |

Manage your storage lifecycle by taking snapshots regularly. Storage volumes that are no longer in use are one of the major hidden costs to be taken into account. Regularly take snapshots as backup and delete storage volumes that are no longer in use.

Use Cloud Management Platform (CMP)

Many enterprises do not want to handle cloud cost optimization on their own due to lack of skills and time-consuming practice. So, they leverage services from CMPs to handle all the cost challenges and save yourself a lot of time and money in the process.



"The worldwide public cloud services market is projected to grow 17.3 percent in 2019 to total \$206.2 billion, up from \$175.8 billion in 2018"

~ Source : Gartner

You can thank us later for this step-by-step guide to optimize your resources that suck up your budget. But before this, you need to figure out if you can handle cost challenges that cloud brings along with it. If not, then leverage an Intelligent Cloud Management platform for your cloud infrastructure.

With Centilytics, you can save a significant amount on your cloud bills by controlling nasty cost spikes.



Centilytics delivers detailed analytics of every penny spent on particular resource. Our recommendations for potential savings depending on your usage patterns helps you forecast cloud budget.

Take a **3-month free trial** and start optimizing.