



Cloud Cost Optimization

Understanding Cloud Costs

- **Overview of Cloud Costs**
 - Typical cost structure in cloud services: compute, storage, data transfer, etc.
 - Cloud-specific tools like AWS Cost Explorer, Google Cloud's Pricing Calculator, Azure Cost Management.
 - Billing overview and various reports
- **Why Cost Optimization Matters**
 - Importance of cost optimization for profitability and sustainability.
 - Unchecked costs can escalate and eat into budgets.
 - Leadspotr example of how it can go wrong (through the roof SQL costs)

Cost Optimization Strategies

- **Right-Sizing Resources**
 - Choose the right size of resources (like VMs) to avoid over-provisioning.
 - Introduce tools for monitoring and adjusting resource utilization.
- **Commitment Discounts**
 - Reserved instances and savings plans for long-term savings.
 - Risks of over-committing and lack of flexibility.
- **Auto-Scaling**
 - Auto-scaling can adjust resources based on demand, preventing overuse.
 - Make sure to also set an upper limit to avoid overpaying.
- **Data Transfer Optimization**
 - Costs associated with data transfer and ways to minimize them.
 - Content delivery networks (CDNs) and data compression. For example, CloudFlare is a cheap/free CDN that I use for many of my applications.
- **Cloud-Native Services**
 - Replacing traditional resources with cloud-native services like serverless and managed databases.

- Cloud native is often cheaper, especially if the resource is geographically close to your other resources (this saves on network bandwidth and improves performance).
- Cost benefits and potential trade-offs.
- **Budget Alerts**
 - You can set budgets and budget alerts to make sure you are not overspending.
 - For Google Cloud, see: <https://cloud.google.com/billing/docs/how-to/budgets>
- **Regular Cost Review**
 - Monitor your costs and review whether you still need all the resources you provisioned.
 - Check if there are new types of cloud resources that can help you save costs.