TBM/FTIM Government Community

along with

FinOps Foundation

Presents:
Cloud Contracting Quick Reference Guide

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Cloud Contracting Quick Reference Guide

Know the guide

Who is it for?

This guide is specific to Infrastructure as a Service (IaaS) and is intended to aid acquisition professionals with a novice to intermediate knowledge of IaaS procurement as it relates to Cloud Service Providers (CSP). The guide is intended to increase awareness of nuances in infrastructure acquisition and to be a complement to other cloud acquisition resources (linked in the reference section). The objective of this document is to outline the most effective means to purchase cloud at the best possible price.

Why do we need it?

As agencies spending on public cloud services continues to grow, they want to ensure they are leveraging the government's scale to purchase cloud IaaS in the most effective manner, at the best prices possible. Cloud IaaS purchasing is complex and different from typical IT product or service procurement so additional guidance is essential and can better prepare recommendations for enhancing public-sector cloud acquisition efficiency.

How did we get it?

Throughout the GSA FinOps pilot (FY'22-FY'23), agencies reported different and inconsistent mechanisms for their purchase of cloud (Infrastructure as a Service (IaaS)). This document was produced by a working group of more than 20 individuals representing 7 agencies under the sponsorship of GSA Office of Technology Policy, GSA IT Vendor Management Office and the FinOps Foundation as a quick reference guide on cloud acquisition best practices.

What questions does it answer?

- How should the contract be structured?
- Should you buy direct from a CSP or through a reseller and why?
- What is the value add of the reseller?
- Does your agency have complete access to billing data?

Cloud Contracting Quick Reference Guide

Cloud Contracting Quick Reference Guide

Know Infrastructure as a Service (IaaS)

Cloud Computing

Cloud computing, particularly Infrastructure as a Service (IaaS), represents a transformative shift in compute and storage for information technology. Unlike traditional computing models that rely on local servers and infrastructure, IaaS enables organizations to access and manage computing resources over the internet, much like a utility service.

Cloud provides a virtualized environment where users can procure and scale computing resources dynamically, including virtual machines, storage, and networking, on a pay-as-you-go basis. Resources in the cloud can grow or shrink with demand to minimize unused resources and maximize performance as required.

Scalable

Funding Shift

IaaS eliminates the need for businesses to invest heavily in physical hardware and infrastructure, allowing them to leverage the computing power and storage capabilities of remote data centers. This minimizes capital funding in lieu of operational funding.

Virtual workloads foster flexibility but also facilitates cost efficiency by shifting the burden of infrastructure maintenance and upgrades to the service provider. Ultimately, IaaS empowers agencies to focus more on their core operations, modernization and innovation, unburdened by the complexities of managing and maintaining extensive on-premises hardware.

Mission Focus

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Know What You Need

Enterprise Contracting

Whenever possible, contracting for IaaS cloud services should be done at the enterprise level to maintain the most control and most consistent pricing across all constituent groups.

Contract Structure

Take advantage of Cloud Service Providers (CSPs) mechanisms that relate accounts to each other and align them hierarchically to how they will be consumed and funded to maximize buying power and discounts.

Negotiated Discount

Agencies have been able to achieve significant negotiated up front discounts from each vendor's published price. There are also tiered discounts available from most CSPs that can range from 5% to 15% based on annual consumption.

Lowest Price Technically Acceptable (LPTA)

CSPs have pricing structures for calculating the price for the cloud solutions. As with any acquisition, the goal is to obtain the maximum benefit (i.e., high quality) for the best value price and cloud computing is no different. If the Government's requirement is limited to one particular CSP and competition is amongst re-sellers of that solution a LPTA tradeoff source selection would be best (as procurement is purely infrastructure).

Cloud Contracting Quick Reference Guide

Know What You Use

Consumption

Cloud is charged hourly based on usage. It is important to know what is being consumed, what those cloud resources support and what organization owns the system, (application or service). Since cloud is charged hourly it is important to know when a cloud resource (compute, storage) is no longer needed so you don't continue to pay for it. It is also important to know this going into a contract renewal period.

Optimization

Managing the cloud environment is an ongoing effort to determine that you are consuming the minimum amount of resources necessary to meet the performance requirements of the system and only paying for what you need. The Contracting Officer should confirm that optimization processes are in place to know the minimum costs required for any renewal or commitment period.

Forecast

Cloud is never in steady state. What was consumed last year does not represent what will be consumed in the upcoming year. Organic growth, system depreciation, net new applications and migrations from on-prem solutions have to all be taken into consideration. The Contracting Officer wll need to understand the forecast ramifications prior to entering into a new contract period.

Cloud Contracting Quick Reference Guide

Know What You Pay (Work with cloud practitioners)

Cloud Cost Calculators

CSPs provide cloud cost calculators, which can run an estimate of the potential cost of the Government organization's current infrastructure. The more accurately an organization inventories and documents its current infrastructure and understands its future requirements, the more accurately the CSP calculators will estimate the potential cost for the cloud solution(s). The calculators generate cost based on the level of detail provided, such as hardware specifications (i.e., memory, storage type and size), applications, number of users, access speed to data, types of professional services. In addition, the calculators consider other variables or ancillary requirements as identified above.

NOTE: On initial migration it may be difficult to know workloads specifics, so it may be beneficial to mimic an existing production system with similar attributes for estimating purposes.

Equitable Cost Comparisons

The goal is to perform a "like-to-like" analysis of the CSPs' proposed prices/costs. Use of a standard cost/price template is the optimal approach. CSPs competing for the same business need to propose costs using the same method.

Initial estimates should be based on "list price" with transparent discounts. Final decisions would take into account those discounts, as well as, other factors such as architecture, technical depth of the team, value-add from the reseller, etc.

Unit Pricing

CSPs competing for the same business need to provide costs using the same method. Costs should be provided as unit costs per service or SKU. It is important to avoid receiving vendor based consolidated or 'lot' pricing.

NOTE: Unless there is pricing transparency where it is easily determined that consolidated pricing provides increased discounts.

Cloud Contracting Quick Reference Guide

Know How You Are Getting Charged

Pay per Use

Compute

- On Demand pricing is list price and charged hourly
- Use Reserved instance or savings plan for consistent and longer term compute loads
- Pay by the hour but decommission short term compute loads when not needed
- Schedule down time for intermittent compute needs (dev, test)

Storage and Data Transfer

- Storage pricing;
- Request and data retrieving pricing
- Data transfer and transfer acceleration pricing; and
- Data management features.

Consumption Based (tiered)

A “Sustained-Use-Discount” offers multiple discounts depending on the requirement; however, the higher the usage during the month, the cheaper the unit price. The discounts are applied on incremental use after reaching certain usage thresholds which means the Government would pay for only the number of minutes that is used in that instance.

Volume Based

Volume-Based: Using this price structure, the Government would pay a price for user access within a range. Once the established range is achieved, access will then come at a lower price. For example, a volume-based price for company X, who is a third-party reseller of AWS, Microsoft’s Azure, GCP and OCI offers four (4) categories to include: 1) explore; 2) standard; 3) premium; and 4) bring your own license volume-based pricing. Pricing is based on performance and expanded capacity for a wider range of users and applications.

* AWS = Amazon Web Services, GCP = Google Cloud Platform, OCI = Oracle Cloud Infrastructure

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Know Your Reseller

Reseller

An organization that acts as a broker between the CSP and the agency and assumes very little risk.

Value Added Reseller (VAR)

An organization that acts as a broker between the CSP and the agency but also provides cloud management services and is willing to take on risk by providing 3 year or 5 year discount pricing knowing that the government can cancel or lose funding in any given fiscal period.

Systems Integrator

An organization that mainly provides configuration, management, and development services who is consolidating cloud costs with those services. It is important to have transparency of costs details

The government agency should always own the account and have full access to billing data from the CSP.

Cloud Contracting Quick Reference Guide

Know When to Consolidate (or Not)

Consolidate

It may be better to consolidate compute with an operating system and license than purchasing those items separately. It may result in a lower price and prevent orphaned licenses when the compute is retired

A lot of resellers will want cloud as a single CLIN in a much larger contract that also includes hardware and software. Make sure that this is cost effective to the government. This method obfuscates transparency in pricing.

Separate

Additional Resources

IaaS, PaaS, SaaS

- GSA's Cloud Information Center
- GSA's IT Software Cloud Computing & Servoces Ordering Guide
- ITC's Best Business Practices for USG Cloud Adoption
- GSA's White Paper: Best Practices for Effective Cloud Computing Services Procurement within Federal Government
- GSA CoE's Cloud Adoption Playbook

Disclaimer

Iaas Procurement

This document purely focuses on "cloud procurement", specifically IaaS, but we acknowledge there are other factors in acquisition (workforce skills and CSP knowledge, existing enterprise technologies, etc.). There are many factors that are outside specific CSP pricing that drives selection. We also understand there are other related influential factors and each organization is responsible for successful deployment that serves their mission.