

# General Services Administration (GSA)

# Multiple Award Schedule (MAS)

# Special Item Number (SIN) 518210C

# Ordering Guide

Version 2.1 30 June 2022

# **TABLE OF CONTENTS:**

A. Introduction to SIN 518210C	4
1. Roles and Responsibilities	4
a. GSA responsibilities	4
b. Ordering Activity responsibilities	5
2. Definitions	5
B. SIN 518210C Cloud Computing and Cloud Related IT Professional Services Explained	6
1. Cloud Computing Defined	6
2. How Cloud Computing is Sold	7
C. SIN 518210C Ordering Guide Steps	8
Perform Market Research	8
2. Draft Your Requirements	9
a. Application Rationalization	9
b. Consider a Cloud Blanket Purchase Agreement (BPA)	ç
c. Acquisition Strategies	10
d. The Cloud Independent Government Cost Estimate (IGCE)	10
e. Choice of Contract Type	11

f. Authorized Reseller vs. CSP (direct)	14
g. Multi-Cloud Strategy for laaS and PaaS?	14
h. Cloud Computing as a Set Aside?	15
i. FedRAMP	15
j. Term Services and Period of Performance (PoP) Alignment	17
k. Additional Available Resources	17
3. Governance	19
4. Fund the Acquisition	20
5. Issue a Solicitation	21
a. eBuy:	21
b. SAM.gov:	21
6. Evaluation of Responses	21
7. Make an Award	22
Appendix A: GSAR Clause 552.238-199	23
Appendix B: Examples of Consumption Based Ordering	27

#### Disclaimer of Liability or Endorsement:

The U.S. General Services Administration (GSA) expressly disclaims liability for errors and omissions in the contents of this document. No warranty of any kind, implied, expressed, or statutory, including but not limited to the warranties of non-infringement of third party rights, title, merchantability or fitness for a particular purpose, is given with respect to the contents of this document or its links to other Internet resources.

The information appearing in this document is for general informational purposes only. Reference in this document to any specific activity (e.g., event, meeting, training), commercial product, process, or service, or the use of any trade, firm or corporation name is for the education, information, and convenience of the government and public, and does not constitute endorsement, recommendation, or favoring by GSA.

GSA does not control or guarantee the accuracy, relevance, timeliness, or completeness of information contained on a website linked to by this document; does not endorse the organizations sponsoring any linked websites; does not endorse the views they express or the products/services they offer; cannot authorize the use of copyrighted materials contained in linked websites. Users must request such authorization from the sponsor of the linked website.

# A. Introduction to SIN 518210C

The <u>GSA Multiple Award Schedule (MAS)</u> are long-term governmentwide contracts with commercial firms providing federal, state, and local government buyers access to more than 11 million commercial supplies (products) and services at volume discount pricing.

MAS contains the Special Item Number (SIN) <u>518210C</u>, Cloud Computing and Cloud Related Information Technology (IT) Professional Services, specifically for just cloud services authorized vendors. SIN 518210C may be utilized by federal Ordering Activities as well as state, local, tribal organizations, certain educational institutions, international organizations, and other eligible users outlined in GSA Order OGP 4800.2I.

SIN 518210C contains over four hundred authorized vendors of cloud computing services as of June 2022, and growing. It also includes cloud related IT professional (labor) services. Therefore, Ordering Activities may solicit to contractors providing SIN 518210C on their schedule contract to find cloud services and cloud related IT cloud professional services (labor).

SIN 518210C contains only cloud services that meet the National Institute of Standards and Technology (NIST) <u>definition of cloud</u>. When multiple requirements are needed, Ordering Activities should only select SIN 518210C when submitting a RFQ on eBuy and state that authorized contractors may utilize other SINs to create a complete solution. Examples would be soliciting the Software SIN (SIN 511210) for software that is not cloud based (and so does not fit the NIST definition) but runs in the cloud and/or manages other cloud offerings, or the Hardware SIN (SIN 33411) for private cloud requirements since no hardware for private clouds is listed on the SIN 518210C.

This SIN 518210C Ordering Guide will only provide guidance to Ordering Activities. It will not prescribe or limit what cloud services contractors provide, nor is it binding to Ordering Activities as they will have to execute in accordance with their Ordering Activity policies and practices. This Guide is intended to be a living document and will be updated periodically, as needed.

For a deeper discussion of the topics discussed in this guide, please refer to the <u>GSA MAS</u> Desk Reference.

# 1. Roles and Responsibilities

GSA is responsible for the award, administration, and management of the GSA Multiple Award Schedule (MAS) Solicitation and the Information Technology Category Attachment to the Solicitation. The Ordering Activity is responsible for the award, administration, management, and closeout of task orders placed against the GSA MAS Contract and compliance with its terms and conditions, the Federal Acquisition Regulation (FAR), and local Ordering Activity policies, as applicable.

# a. GSA responsibilities

 Administer the GSA MAS Information Technology Category, including annual subcontracting goal reporting, contract modifications to implement new FAR guidance, and updating the terms and conditions.

- Provide advice and guidance to Ordering Activities regarding specific cloud acquisition matters, by emailing the GSA Cloud Team at <u>cloudinfo@gsa.gov</u>.
- Determines "fair and reasonable" prices and ceiling prices for a single unit when awarding GSA contracts.

### b. Ordering Activity responsibilities

- Define order requirements (technical, security, operational, workflow, functional, etc.), including evaluation criteria.
- Prepare requirements documents for solicitations against contracts. This includes a Statement of Work (SOW) or Performance Work Statement (PWS) for task orders (TO) and product listings and other necessary information for delivery orders (DO).
- Properly manage funds in accordance with (IAW) appropriation laws and their Ordering Activity rules and regulations.
- Evaluate quotes IAW the Federal Acquisition Regulation (FAR) and the Ordering Activity defined evaluation criteria.
- Monitor performance, including appointing a Contracting Officer's Representative (COR) when applicable.
- Negotiate pricing, discounts, and other Simplified Acquisition Threshold (SAT) pricing with authorized vendors when applicable.

### 2. Definitions

- Ordering Activity Contracting Officer (OACO): the Ordering Activity warranted Contracting Officer (CO) placing the order.
- Office of the Chief Acquisition Officer (OCAO): the team responsible for developing and reviewing acquisition policies, procedures and related training for the Ordering Activity.
- GSA Contracting Officer (CO): a person with the authority to enter into, administer, and/or terminate contracts and make related determinations and findings. The GSA CO administers the GSA MAS contract.
- Special Item Number (SIN): the unique identification number assigned to specific product or service categories under the GSA MAS Solicitation.
- Contractor Team Arrangement (CTA): two or more GSA MAS authorized contractors working together to provide a total solution to the Ordering Activity, whereby each is working under their respective GSA MAS contract awards. This is not a prime/sub arrangement. See <a href="https://www.gsa.gov/cta">www.gsa.gov/cta</a> for more information.
- Ordering Activity: a federal, state, or local government Ordering Activity or other eligible entity that is authorized to use SIN 518210C.
- <u>Cooperative Purchasing Program</u>: authorized Ordering Activities, per 40 U.S.C. 502(c), may leverage SIN 518210C under the GSA Cooperative Purchasing Program. <u>Eligibility</u> to use GSA Sources of Supply.
- <u>Disaster Purchasing Program</u>: authorized Ordering Activities, per 40 U.S.C. 502(c), may leverage SIN 518210C under the GSA Disaster Purchasing Program to facilitate disaster preparation, response, or major disaster recovery.
- Authorized Reseller: an entity that has been contractually authorized by a cloud service provider (CSP) to act as an authorized agent or intermediary cloud broker to offer, negotiate, and sell, on the behalf of the CSP, the CSP's cloud services.

- Authorized Contractor: an entity that has been awarded SIN 518210C Cloud Computing and Cloud Related IT Professional Services on their GSA MAS award. An authorized vendor can be either a CSP or an authorized reseller.
- Cloud Service Provider (CSP): an entity that directly operates and manages the cloud services (i.e., IaaS, PaaS, SaaS) technology (e.g., facility, hardware, software).

# B. SIN 518210C Cloud Computing and Cloud Related IT Professional Services Explained

# 1. Cloud Computing Defined

For this document we use the definition of "cloud" by the <u>National Institute of Standards and Technology (NIST) Special Publication 800-145 The NIST Definition of Cloud Computing</u>. Traditionally an Ordering Activity would purchase hardware and/or software infrastructure outright as well as unboxing it, racking, stacking and wiring it, configuring it, etc. With cloud computing, an Ordering Activity remotely orders virtual machines, applications and more at the touch of a button.

The National Institute of Standards and Technology (NIST) definition of cloud computing is broken down into these five distinct characteristics:

- On Demand Self Service A consumer can unilaterally provision computing capabilities, such as server time and network storage, as needed automatically without requiring human interaction with each service provider.
- Rapid Elasticity Capabilities can be elastically provisioned and released, in some cases automatically, to scale rapidly outward and inward commensurate with demand. To the consumer, the capabilities available for provisioning often appear to be unlimited and can be appropriated in any quantity at any time.
- Broad Network Access Capabilities are available over the network and accessed through standard mechanisms that promote use by heterogeneous thin or thick client platforms (e.g., mobile phones, tablets, laptops, and workstations).
- Resource Pooling The provider's computing resources are pooled to serve multiple
  consumers using a multi-tenant model, with different physical and virtual resources dynamically
  assigned and reassigned according to consumer demand. There is a sense of location
  independence in that the customer generally has no control or knowledge over the exact
  location of the provided resources but may be able to specify location at a higher level of
  abstraction (e.g., country, state, or datacenter). Examples of resources include storage,
  processing, memory, and network bandwidth.
- Measured Service Cloud systems automatically control and optimize resource use by leveraging a metering capability at some level of abstraction appropriate to the type of service (e.g., storage, processing, bandwidth, and active user accounts). Resource usage can be monitored, controlled, and reported, providing transparency for both the provider and consumer of the utilized service.

To be considered cloud computing by this definition, the cloud service must possess all of the above five characteristics.

There are three primary cloud service models you can purchase:

- laaS (Infrastructure as a Service) The capability provided to the consumer is to provision processing, storage, networks, and other fundamental computing resources where the consumer is able to deploy and run arbitrary software, which can include operating systems and applications. The consumer does not manage or control the underlying cloud infrastructure but has control over operating systems, storage, and deployed applications; and possibly limited control of select networking components (e.g., host firewalls).
- PaaS (Platform as a Service) The capability provided to the consumer is to deploy onto the
  cloud infrastructure consumer-created or acquired applications created using programming
  languages, libraries, services, and tools supported by the provider. The consumer does not
  manage or control the underlying cloud infrastructure including network, servers, operating
  systems, or storage, but has control over the deployed applications and possibly configuration
  settings for the application-hosting environment.
- SaaS (Software as a Service) The capability provided to the consumer is to use the
  provider's applications running on a cloud infrastructure. The applications are accessible from
  various client devices through either a thin client interface, such as a web browser (e.g., webbased email), or a program interface. The consumer does not manage or control the underlying
  cloud infrastructure including network, servers, operating systems, storage, or even individual
  application capabilities, with the possible exception of limited user specific application
  configuration settings.

You must also choose a deployment model. Deployment models detail how many separate, multi-tenants are in the cloud environment and what the relationship between these tenants is. There are four NIST cloud deployment models:

- **Public Cloud** The cloud infrastructure is provisioned for open use by the general public. It may be owned, managed, and operated by a business, academic, or government organization, or some combination of them. It exists on the premises of the cloud provider.
- **Private Cloud** The cloud infrastructure is provisioned for exclusive use by a single organization comprising multiple consumers (e.g., business units). It may be owned, managed, and operated by the organization, a third party, or some combination of SIN 518210C.
- **Community Cloud** The cloud infrastructure is provisioned for exclusive use by a specific community of consumers from organizations that have shared concerns (e.g., mission, security requirements, policy, and compliance considerations). It may be owned, managed, and operated by one or more of the organizations in the community, a third party, or some combination of them, and it may exist on or off premises.
- Hybrid Cloud The cloud infrastructure is a composition of two or more distinct cloud infrastructures (private, community, or public) that remain unique entities, but are bound together by standardized or proprietary technology that enables data and application portability (e.g., cloud bursting for load balancing between clouds).

# 2. How Cloud Computing is Sold

Most of the cloud computing pricing models require careful analysis by Ordering Activity personnel based on the unique attributes of their acquisition. Many pricing models require ongoing monitoring of usage and available funding. See the discussion on choosing contract types later in this document for guidance on using a not-to-exceed (NTE) ceiling price by CLIN.

- laaS/PaaS priced by the Increment (e.g., transaction, Minute, Seconds, Hours or Days), for central processing units (CPUs), storage or memory for virtual machines in the cloud environment. Depending on the contract type awarded, this may cause invoices to vary from month to month. In the case of communications application programming interface (API) platforms that charge by short message service (SMS) message/email sent or voice minutes used
- SaaS priced by the Seat (e.g., application user seat), most commonly by the seat per month or seat per year.
- SaaS priced by the Transaction (e.g., up/download, operation), as in the case of large online databases. Login may or may not be free of charges, but a per transaction charge accrues whenever the customer issues a query against that large database (e.g., real estate or scientific applications). Another example, for SaaS, might be a charge for each read/write disk operation, sometimes sold in dollars per 10M operations, etc.
- laaS/PaaS priced by Data Transport, is calculated from the transport of data into/within/out of the data center.
- laaS/PaaS priced by Service Term (e.g., time period), sometimes called "reservations," "reserved instances" (RIs), "committed use" or "savings plans", each CSP has their own specific term for the offering. For the purpose of this document we will refer to them as the generic term "cloud reservations". These are commitments to purchase compute capacity, or buckets of transactions, needed for your Ordering Activity over a defined and agreed to period of time, usually in exchange for a discount. Cloud reservations are allowed per the GSA MAS Solicitation, as long as they are paid for in arrears (31 U.S.C. 3324). They are recommended for workloads that have steady or predictable usage patterns. These "cloud reservations" offer a discount against on-demand pricing (per minute, etc.) depending on length of term, whereas volume discounts offer a tiered discount that depends on certain thresholds.

# C. SIN 518210C Ordering Guide Steps

#### 1. Perform Market Research

There are many ways to perform market research: <u>GSA's Market Research as a Service</u> (<u>MRAS</u>), Small Business Administration (SBA) resources, Defense Acquisition University (DAU) resources, etc. You are encouraged to look at the options that align with your Ordering Activity's needs.

GSA's Market Research as a Service (MRAS) Tool lessens much of the frustration that the back and forth market research process may have. MRAS utilizes the latest automated research techniques to collect authorized vendor response data. This no-cost service cross-indexes Ordering Activity requirements against authorized contractors on SIN 518210C that support cloud. To initiate a MRAS, an Ordering Activity will:

- Engage their GSA <u>Customer Service Director (CSD)</u>: Contact your CSD who will help quide you through this process.
- 2. Request a Scope Review: The GSA CSD and the Subject Matter Experts (SMEs) for the applicable GSA vehicle will review the requirement to determine if it is within scope of one of the various GSA contracts (Governmentwide Acquisition Contract (GWAC), OASIS, MAS, VETS2, etc.).

3. Request a Request for Information (RFI) from MRAS team: The GSA CSD and Ordering Activity will together fill out a short requirements questionnaire so that the MRAS team can create a RFI.

GSA will then publish a market research RFI on behalf of the Ordering Activity, allowing GSA to gather authorized contractor responses for an agreed upon period of time. After that time elapses, GSA collects and collates the results and delivers a report to the Ordering Activity. The report details the total number of interested authorized contractors, their relevant GSA contracts specific to the requirements, their socioeconomic profiles, their business size, their responses to specific yes/no technical questions, and more. Check out full MRAS samples here (A, B).

The responses gathered from the market research may cause you to rethink choices of contract type and other requirements. In that case you must loop back to revise your requirements.

# 2. Draft Your Requirements

### a. Application Rationalization

The authorized Ordering Activity should first complete the <u>Application Rationalization</u> (<u>AppRat</u>) <u>process</u>. This typically includes:

- inventorying the digital environment
- assessing which applications are cloud ready and which are not
- determining which are high strategic business value
- discovering which are underutilized
- seeing which should be kept and which should be retired
- finding system/services inter-decencies required supporting services/data

Once the Application Rationalization process has been completed, it is time for the program/technical team, along with the acquisition team, to draft the formal cloud services requirements and acquisition strategy.

If an Ordering Activity chooses to use cloud professional services for the Application Rationalization process, it is recommended to do this as a standalone award, and that deliverable becomes the requirements for a second award to execute the migration to a CSP's cloud. Also, the authorized Ordering Activity can require demonstrated experience with similar size, scope, and subject matter expertise of projects, with applicable CSP certifications, if available.

# b. Consider a Cloud Blanket Purchase Agreement (BPA)

Ordering Activities can award BPAs (FAR 8.405-3) against the GSA MAS SIN 518210C.

Ordering Activities award BPAs (i.e., multiple award or single award (see limitations: <u>GSA</u>, <u>FAR 8.405-3</u>)) when an authorized Ordering Activity defines requirements (e.g., business, operations, security, technical) that allow the authorized Ordering Activity to issue BPA awards to authorized contractors that meet the BPA requirements. The authorized Ordering Activity, and other authorized Ordering Activities, can then use the BPA to compete TOs against the BPA awardees. The TOs inherit the BPA requirements and can include additional requirements or further define and delineate the requirements (e.g., quantities). An awarded TO results in the

legally binding "contract" between the Ordering Activity and the authorized contractor. (*Note: Per FAR 8.405-3, they are referred to as TOs, not Orders, as SIN 518210C is a service, not a product.*) When any TO is created, decisions about contract type and funding type could be made at that time depending on the nature of the cloud computing requirement.

### c. Acquisition Strategies

• **Distributed/Office Level**: Supports a distinct and individual TO for specific, defined, and known set of requirements.

Here, the cloud services acquisition journey begins with what can be the most difficult step for some: defining your cloud service requirements. Requirements must be developed for each application so that they can be cloud-migrated or cloud-developed (i.e, Application Rationalization). The result is that the target cloud architecture is defined for each application before it is migrated to the appropriate/available cloud environment(s). This structured project process is no different from a non-cloud project.

• Enterprise/Chief Information Officer (CIO) Level: Development of a BPA that defines baseline requirements for specific recurring needs of an Ordering Activity with TO(s) awarded under the BPA for specific quantities and deliverable times.

Here the cloud services acquisition journey begins with reviewing current Ordering Activity cloud utilization and defining the overall goals and objectives of establishing an enterprise-wide purchasing vehicle (centralization, governance, risk management, cost savings, etc.).

#### Other acquisition strategies to consider:

- Best practice is to separate the procurement of cloud services (laaS, PaaS, SaaS) from the cloud related IT professional services (labor) often associated with the cloud (e.g., architecting, migration, configuration etc.). Awarding the IT professional services to a different Authorized Contractor may provide unbiased support. This provides the greatest flexibility in utilizing in-house resources (Ordering Activity or contractor) with the best knowledge of existing systems for delivering professional services.
- Before seeking to leverage emerging technologies, conduct due diligence to ensure the likelihood of success. Untested emerging technologies may not meet early expectations for performance or may not integrate into Ordering Activity operations as initially anticipated. Ordering Activities should evaluate which services are available that meet Ordering Activity/federal security requirements.

# d. The Cloud Independent Government Cost Estimate (IGCE)

The primary way in determining if "a price is reasonable" is to develop a cost estimate (e.g., IGCE) and evaluate proposals in comparison to the developed cost estimate. The Ordering Activity should check with their own internal supplemental acquisition regulations, policies, and the FAR to understand if an IGCE is required for their specific cloud services procurement. Typically, the Ordering Activity must first estimate the value

of the acquisition and if that estimated value exceeds the Simplified Acquisition Threshold (SAT), then they are required to conduct market research.

An IGCE is a complex undertaking for cloud services as individual cloud stock keeping units (SKUs) need to be compared in an apples-to-apples way since they are sometimes tied to a specific authorized contractor. If available, universal product codes (UPCs) should be used at the CSP level when comparing products. Best practice is to ask the CSP or authorized reseller the structure of their cloud service offerings and how they map across their commercial cloud services ecosystem.

Another suggestion is to create a set of technical requirements for the entire portfolio of Ordering Activity applications to be hosted in the cloud. Then, visit the websites of several CSPs and use the CSPs' online calculators to help create the IGCE. The calculators provide public pricing that can be used in conjunction with other sources for compiling an IGCE. These calculators are another tool in an Ordering Activity's tool kit, but Ordering Activities should also attempt to find other ways to INDEPENDENTLY estimate costs. Note: not all CSPs price their solutions in the same manner; it is important to clearly understand how each CSP prices offerings, costs elements and noncost elements. It takes time to research, understand, and map those elements to your IGCE.

When performing a price analysis during market research, consider an approach with emphasis on pursuing volume discounts (which may be a tiered set of discounts based on volume vs. fixed discounts) and enterprise-wide pricing. Ordering activities can maximize cost savings by driving Ordering Activity cloud service customers toward an enterprise-wide cloud computing ordering approach (e.g., two-three Ordering Activity-wide cloud orders or BPAs managed by one program office) instead of each program office issuing individual orders for cloud computing. Similarly, consolidating various IT services under fewer contracts can also generate volume discounts. Like with any other product or service, true savings for cloud computing is realized when customers combine their cloud services requirements and leverage their buying power as a large volume customer. The Ordering Activity CIO (under Federal Information Technology Acquisition Reform Act (FITARA)) has to approve these actions to ensure enterprise level deployment.

# e. Choice of Contract Type

The contract type suggestions below are for GSA MAS Solicitation cloud services (e.g., laaS, PaaS, SaaS) plus associated tools for automated managed services which are often billed as SaaS. The choice of contract type (i.e., fixed price, labor, or time-and-material) for cloud related IT professional services (work performed by humans), should be considered separately. To learn more, please reference the "GSA Multiple Award Schedule Ordering Guide Quick Reference Summer 2020".

It's important that the Ordering Activity identifies if the cloud services will have a baseline utilization that does not fluctuate over the period of performance, or if utilization will have high fluctuation/surge that would benefit from consumption/utilization-based pricing. This will guide your choice of contract type.

Requirements Type Task Orders: As discussed in the GSA Acquisition Letter (AL) MV-21-06, Procurement of Cloud Computing on a Consumption Basis under the Federal Supply Schedule (FSS) program, GSA proposed a requirements task order framework to buy cloud on a consumption basis, and proposed facilitating incremental funding via optional CLINs. (see Appendix A for General Services Acquisition Regulation (GSAR) Clause 552.238.199 Special Ordering Procedures Applicable when Procuring Cloud Computing on a Consumption Basis (MAR 2022) and an example in Appendix B). This task order type is appropriate when the authorized Ordering Activity anticipates recurring requirements but cannot predetermine the precise quantities of cloud computing services that designated government activities will need during a definite period.

NOTE: The special ordering procedures clause (GSAR Clause 552.238.199 Special Ordering Procedures Applicable when Procuring Cloud Computing on a Consumption Basis (MAR 2022)) is only required, per (c)(1), "when placing an incrementally funded task order under this contract for cloud computing services on a consumption basis." Otherwise, the clause is optional. Nothing in GSAR 552.238-199 shall be construed to supersede the Ordering Activity's contract funding policies (GSAR 552.238-199(f)(3))

#### Consumption Framework

- Ordering activities can do this today but current policies don't provide a roadmap for how to implement a consumption framework. Per GSA's Acquisition Letter (AL) MV-21-06 Supplement 1, dated March 18, 2022, adding GSAR Clause 552.238-199 into the MAS Solicitation allows Ordering Activities to use a "requirements type task order" contract type, which is a "task order that provides for filling all actual purchase requirements of a designated authorized Ordering Activity during a specified contract period, with performance by the Contractor being scheduled when the authorized Ordering Activity awards, or exercises options for, individual contract line items (CLINs) under the task order."
- Well defined requirements lend themselves to the obligation of funding on a contract upfront, while unpredictable requirements might best be funded using optional CLINs that are funded at time of activation. But the core benefits of cloud include on-demand self-service and rapid elasticity, which supports agile development, DevOps, and unforeseen spikes in demand. If your requirements aren't well defined, consider establishing predefined requirements on CLINs to be used later.

#### Incremental Funding

The Antideficiency Act requires that whenever an Ordering Activity enters into a contractual obligation it must obligate funding sufficient to cover the contractual obligation. While this is necessary to meet the legal requirement, it can commit Ordering Activity funds in a manner that may preclude any alternative use of those funds.

Note: Ordering activities incur obligations and make expenditures while executing the funded programs, projects, and activities. An obligation is any action that legally binds the Ordering Activity to make an outlay or

expenditure of funds immediately or in the future. Expenditures may not exceed obligations, and corrective action must be taken promptly to validate the expenditures and obligation if it appears that they have.

- When your actual cloud expenditure for the fiscal year is forecasted to not match the amount of funds obligated, you may need to obligate more money or deobligate excess funds on the contract. Make sure to coordinate such matters with your controller/financial organization (CFO) and legal counsel.
- The main elements of Acquisition Letter MV-21-06 provide a framework for obligating funds "as you go" while providing safeguards to ensure you do not violate the Antideficiency Act. This policy requires Ordering Activities to obligate funding when optional CLINs are activated in accordance with FAR 17.2. This is not as fluid as private sector practices but it does provide a way for Ordering Activities not to obligate funds on optional CLINs until there is a bona fide need and those CLINs are activated.

Note: MAS BPAs have no ceiling value, only an estimate, so Ordering Activities can have many options without having to worry about using a ceiling like under an Indefinite-Delivery Indefinite-Quantity (IDIQ)/GWAC (e.g., STARS 8(a)). The ceiling value is only on the Ordering Activities awarded TO/PO. It is not easily increased (e.g., increase in scope), so the ceiling value should be estimated appropriately.

- Selected referenced laws for incremental funding
  - DOD
    - <u>10 U.S.C. 2306c Armed Forces Multiyear Contracts:</u> Acquisition of Services
    - 10 U.S.C. 2410a Armed Forces Contracts for Periods Crossing Fiscal Years: Severable Service Contracts; Leases of Real or Personal Property
  - Civilian
    - 41 U.S.C. 3903 Public Contracts Multiyear Contracts
    - 41 U.S.C. 3902 Public Contracts Severable Services Contracts for Periods Crossing Fiscal Years

Note: the above are not the full compendium of laws, others like 31 U.S.C 1341, 31 U.S.C 1342, and 31 U.S.C 1517 pertaining to Anti-Deficiency Act may be applicable.

- Always consult your Ordering Activity's Chief Financial Officer (CFO) and legal counsel for guidance on the specific laws, regulations, and authorities applicable to funding your order.
- **Fixed Price (FP) Model**: This type of contract has the advantage of allowing changes to the number or complexion of cloud services at the touch of a button, but may not have the ability to reduce overall cost when not utilizing the cloud resource. If your agency has the ability to leverage more than one contract type, a blended/optimized solution may be possible. This blended model works best if an Ordering Activity has a good handle on

the baseline for cloud computing needs. A BPA might be used to combine FP, Time & Material (T&M), and Requirements Type models since each Task Order (TO) issued under a BPA can carry a different contract type.

• Time & Materials (T&M) Model: Since cloud services often accrue charges by the minute, hour, etc., charges will vary from invoice to invoice over the period of performance. (That's the "T" in T&M.) Since FAR 16.601 only references hourly rates, agencies may need to define a method of calculating fractional hours if needed. This closely resembles invoices for work done on a labor contract. This type of contract fits most closely to the way charges for cloud services often accrue commercially. It is worth noting that the Federal Acquisition Regulation (FAR) only discusses the T&M model contract with respect to labor. So, agencies must rely on FAR 1.102(d), which essentially says that if the FAR does not expressly forbid it, then it is permissible. Though it will be up to the Ordering Activity's CO to determine what they deem allowable for the agency.

There are certain requirements/limitations for T&M in accordance with FAR Part 12.07. For example, the CO must prepare a determination and findings (D&F) that shall be assigned and signed by the Head of Contracting Activity (HCA) or other official in accordance with agency policy, and additional approval required for contracts expected to extend beyond three years. Also, required with FAR 8.404(h)(3)(i)(B).

### f. Authorized Reseller vs. CSP (direct)

Some CSPs sell directly while others prefer to sell via a network of authorized resellers. This arrangement is readily compared to a car manufacturer/dealer relationship. While it can be difficult to track down the cloud services you desire to an authorized reseller that sells it, there is an advantage to this arrangement.

An IT customer may need access to more than one CSP for regulatory and/or technical reasons. An award to an authorized reseller that offers multiple CSP catalogs may reduce the number of acquisition actions needed. On the other hand, an award to a single CSP allows the Ordering Activity a more direct relationship to the CSP without a third party, which may result in the ability to obtain discounting as well as different customer support options.

The acquisition strategy will be driven by the Ordering Activity's technical, performance, and management requirements which may or may not lend itself to authorized resellers or CSPs. The depth and breadth of the GSA MAS Solicitation provides the ability to meet varying needs.

# g. Multi-Cloud Strategy for laaS and PaaS?

An authorized Ordering Activity may decide to leverage cloud services (i.e. laaS, PaaS, SaaS) from multiple CSPs, which means they are operating in a multi-cloud environment using a multi-cloud strategy to meet their requirements.

When an authorized Ordering Activity uses a multi-cloud strategy they are then able to determine which CSP's cloud services best satisfy their requirements (e.g., business, operations, security, technical) and deploy their workloads accordingly. A multi-cloud strategy may also allow Ordering Activities to take advantage of each CSP's evolving innovation and/or specialized services (e.g. machine learning, artificial intelligence).

It is important to note that these benefits accrue to enterprises that deploy and leverage the laaS and PaaS of more than one CSP, not those that segregate their cloud business by standardizing with a single laaS and PaaS provider and then working with various SaaS providers.

Ordering Activities could also consider employing a multi-cloud strategy, perhaps in conjunction with a BPA. There are cloud authorized resellers who can provide access to multiple CSPs. Requirements documents and solicitations can be structured to include access to multiple CSPs that meet a list of specified requirements. Solicitations can be designed to specify that authorized resellers must provide access to a particular CSP (as supported through the appropriate Brand Name Justification or Limited Source Justification) as well as access to "X" number of other CSPs whose cloud offerings meet a list of specified requirements as defined by the Ordering Activity. This way the Ordering Activity is guaranteed access to the CSP(s) that are currently hosting their architecture while allowing for the flexibility to access other CSPs that can be leveraged moving forward.

Multi-cloud buffers the Ordering Activity from the risk of CSP lock-in, which may reduce the fees/burden of an Ordering Activity when moving its data to a different CSP. Ordering Activities that cannot cost-justify or afford to take their cloud business from their current CSP to a competitor effectively forfeit negotiating leverage. An Ordering Activity might choose to make it a requirement of the contract that the Authorized Contractor shall cooperate with other Authorized Contractors and government staff when transitioning between CSPs.

### h. Cloud Computing as a Set Aside?

Cloud computing services are frequently sold by small business authorized resellers of large CSP businesses' cloud offerings. So you might think this is a good case for a small business set aside.

However, the Small Business Administration (SBA) considers cloud computing **as a service and not a product** per CFR 121.1203(d)(3). Therefore the non-manufacturing rule (NMR) does not apply since the NMR only applies to products. Often the authorized reseller is a small business and the CSP is a large business, and more than 50% of the funding goes to the CSP, therefore no small business credit is given.

The bottom line is that a set aside for cloud computing will usually be indefensible. One exception is if the CSP itself is a small business (which is not common). Another exception is if the authorized reseller is a small business and the CSP is a large business <u>and</u> the "primary purpose" of the acquisition is <u>not</u> for cloud computing (which is not likely).

Keep in mind that cloud computing is excluded from the limitations on subcontracting calculation where the small business concern will perform other cloud professional services that are the primary purpose of the acquisition, in accordance with 13 CFR 125.6(a)(1).

#### i. FedRAMP

The Federal Risk and Authorization Management Program (<u>FedRAMP</u>) is a governmentwide program that promotes the adoption of secure cloud services across the federal government by

providing a standardized approach to security assessment, authorization, and continuous monitoring for cloud products and services.

FedRAMP eliminates duplicative efforts by providing a common security framework. Agencies review their security requirements against a standardized baseline. A CSP goes through the authorization process once, and after achieving an authorization for their Cloud Service Offering (CSO), the security package can be reused by any federal agency.

When thinking about FedRAMP, it is best to look at it from two different perspectives: acquisition versus security.

#### Acquisition

- To accomplish the goals of the Competition in Contracting Act (10 USC §2304(a)(1), FedRAMP recommends against making a FedRAMP authorization a requirement for any cloud services procurement because it unfairly limits competition.
- The recommendation is to only require respondents to state what their FedRAMP status is, and to score possession of a FedRAMP authorization appropriately during the evaluation of responses. Ultimately, the authorized Ordering Activity CO will make the decision on FedRAMP being a requirement.

#### Security

Once the Ordering Activity is in post award status, per the rules of the Federal Information Security Management Act (FISMA), each Ordering Activity CIO will still need to conduct their Assessment and Analysis (A&A) and issue an all encompassing Authority to Operate (ATO) for the CSO to go into production by using NIST Special Publication (SP) 800-53 rev. 5 Risk Management Framework (RMF), which is what FedRAMP uses per their Policy Memo. This ATO process should be more streamlined for success if the CSO already has a FedRAMP authorization.

#### Obtaining a FedRAMP Authorization:

There are two approaches for a CSP to obtain a FedRAMP Authorization (<u>if one does not already exist</u>), a provisional authorization through the Joint Authorization Board (JAB) or an authorization through an agency.

- In the <u>Agency Authorization</u> path, agencies may work directly with a CSP for authorization at any time. CSPs that make a business decision to work directly with an agency to pursue an ATO will work with the agency throughout the FedRAMP Authorization process.
- 2. In the <u>JAB Authorization</u> path, the JAB is the primary governing body for FedRAMP and includes the Department of Defense (DoD), Department of Homeland Security (DHS), and GSA. The JAB selects approximately 12 cloud products a year to work with for a JAB Provisional Authority to Operate (P-ATO). Additionally, the JAB is responsible for performing the continuous monitoring for all JAB Authorized cloud products.

### j. Term Services and Period of Performance (PoP) Alignment

Ordering Activities can procure multi-year "cloud reservations" as long as the multi-year reservation falls within a single PoP.

The execution of any cloud service (1 year reservation, 3 year reservation\*) can not commit the Ordering Activity to incur costs beyond a CO awarded PoP.

- Example A: An Ordering Activity could not purchase a 3 year reservation under a 1 year PoP (e.g. base year, option year); the 3 year reservation extends beyond the PoP and would make the Ordering Activity incur costs outside of the executed PoP. They also can not execute the Base Year, Option Year 1, and Option Year 2 PoPs at the same time as only one PoP can be executed at a time.
- Example B: If using the Multi-Year Contracting special contracting method under FAR 17.1 an Ordering Activity could potentially award a 5 year PoP in accordance with the requirements set forth at FAR 17.1. A 3 year reservation could be executed anytime in the 1st and 2nd year, but once the contract was 2 years and 1 day into the PoP the Ordering Activity would not be able to execute a 3 year reservation since the reservation period would extend beyond the end of the PoP. Please note that Contracting Officers will need to work with the finance organization, OCAO, and legal counsel before using Multi-Year Contracting and reservations greater than one year.

From the examples above, you can see that procuring cloud services on SIN 518210C does not function the same as procuring perpetual software products from SIN 511210 Software Licenses.

- With SIN 518210C Cloud Computing and Cloud Related IT Professional Services, the limitation is the PoP start/end dates; the cloud service stops on the PoP end date.
- With SIN 511210 Software Licenses, the only concern is the incurred cost must happen before the PoP end date, since the software product can be used after the end date.

The primary issues revolve around who in the Ordering Activity has the authority to commit the Ordering Activity to incur costs, which is the authority of a CO. The decision to execute an option also resides entirely with the CO.

\* 3 year "cloud reservations" can be purchased with different types of appropriations (e.g., single year, multi-year, no year funds) per (10 U.S.C. 2306c - Armed Forces - Multiyear Contracts:

Acquisition of Services and 41 U.S.C. 3903 - Public Contracts - Multiyear Contracts)

#### k. Additional Available Resources

GSA has a wide variety of support for your cloud acquisition depending on the phase you are currently in. Some of the more common services can be found below:

Note: The services listed below are easily acquired via Inter Agency Agreements (IAAs/Memorandum of Agreements (MOAs)), not contracting actions. These can be done at the Program/Product level.

#### GSA Federal Acquisition Service (FAS)

- Office of Assisted Acquisition Services (AAS): GSA's Office of Assisted Acquisition Services (AAS) provides custom acquisition, project, and financial management support services to federal Ordering Activities across the federal government for a fee. Ordering Activities may get the Contracting Officer services they need while being guided during every step of the process. Ordering Activities may focus less on managing the procurement process and more on the Ordering Activity's core mission. GSA's AAS includes highly experienced personnel with all stages of cloud acquisition. They can provide GSA Contracting Officer services for a fee. Contact AAS using their online form at <a href="mailto:ass.gsa.gov">ass.gsa.gov</a>.
- Office of Information Technology Category (ITC): connects federal, state, local, and tribal governments with the IT solutions and industry partners that can help them meet their missions. We support our ITC leadership team, led by Assistant Commissioner Laura Stanton. Learn more about ITC offerings through Laura's perspective in our Great Government through Technology blog. Our team helps harness the government's buying power to save agencies money on the cutting-edge technology they need to modernize. We lead initiatives to research emerging technologies that may help or impact the federal government's priorities and objectives and strive to build a loyal, satisfied customer base with best-in-class customer service.

Need help? To make sure we're delivering the quality service our agency and industry partners expect, we offer several support channels to help resolve questions and issues, improve acquisition efficiency, and identify the best IT solutions. Contact the IT Customer Service Center at <a href="ITCSC@gsa.gov">ITCSC@gsa.gov</a> or call us at 1-855-ITaid4U (1-855-482-4348).

#### <u>Technology Transformation Services (TTS)</u>

- Cloud.gov: Cloud.gov is an 18F cloud PaaS product which enables Ordering Activities to deliver services to the public as fast as they can develop them. It is an open source, highly portable PaaS available to Ordering Activities. Ordering Activities may take the headache and confusion out of regulatory, compliance and security challenges by leveraging Cloud.gov's FedRAMP Joint Authorization Board (JAB) Provisional Authority to Operate (P-ATO). Because it is built specifically for government by government, an authorized Ordering Activity can just manage its own code while Cloud.gov handles the security and maintenance of everything underneath. Cloud.gov is run on top of Amazon Web Services' IaaS. For additional questions and Cloud.gov contact information, visit https://cloud.gov/docs/help/.
- The Federal Risk and Authorization Management Program (FedRAMP):
   FedRAMP is a governmentwide program that provides a standardized approach to security assessment, authorization, and continuous monitoring for cloud products and services. It enables Ordering Activities

to rapidly adapt from old, insecure legacy IT to mission-enabling, secure, and cost effective cloud-based IT.

All executive Ordering Activities are required to follow the FedRAMP process for any IaaS/PaaS/SaaS environment before putting it into production. Each Ordering Activity's System Security Officer (SSO) is ultimately responsible for incorporating the FedRAMP process whenever cloud computing is involved. Contact the FedRAMP team by emailing info@FedRAMP.gov.

#### Cloud Adoption Center of Excellence (CoE)

The Cloud Adoption CoE facilitates successful integration of cloud services by helping agencies select, and fashion, the right migration path to implement by an industry partner. The Cloud Adoption team developed a set of services based on best practices, both in the commercial and Government sectors, to help agencies successfully implement cloud strategies. Their service offerings include cloud security assessment, cloud governance implementation, cloud migration planning and more. The CoE posts updates on their work, best practices, progress and more here.

Contact the Cloud Adoption Center of Excellence by emailing connectcoe@gsa.gov.

For additional help expressing cloud requirements and to access the various cloud templates for each migration stage, visit <a href="https://cic.gsa.gov/resources/templates">https://cic.gsa.gov/resources/templates</a> or email <a href="mailto:cloudinfo@gsa.gov">cloudinfo@gsa.gov</a>.

#### 3. Governance

Without proper cloud governance in place, many funding, contracting, and general communication failures are likely. Without such governance/controls in place, your Ordering Activity could suffer runaway cloud expenses.

In preparation for a cloud award, your Ordering Activity must be able to answer questions such as:

- 1. Who in the Ordering Activity will monitor the burn rate of the funding and be in charge of alerting others of issues of funding shortfall and/or overages?
- 2. Who will be the cloud finance point of contact that can reconcile cloud usage with a cloud invoice and review cloud utilization reports for chargeback purposes? Will it be the COR or someone else?
- 3. Who will have the task of provisioning new cloud services under a Task Order? Who will have the authority to delegate that task?
- 4. Who will be in charge of ensuring/authorizing the spinning down of cloud services when they are not in use?
- 5. Who will be responsible for monitoring security and compliance of the cloud services?

The Ordering Activity might find that it needs to add a requirement for contractor labor to accomplish the above tasks. Even when contractor labor is not included in the solicitation, Ordering Activities must make it clear in their requirements that the CSP or authorized reseller must do nothing that restricts direct access to all tools, data, and capabilities that it requires for governance.

For an in depth review of governance, look at Section 8 of <u>Federal Cloud Strategy Guide</u> and the <u>governance resources</u> on the Cloud Information Center.

GSA recommends coordinating with your CFO, OCAO, and legal counsel.

# 4. Fund the Acquisition

The proper funding of cloud computing contracts has been an obstacle to cloud services acquisition. As industry has innovated new ways to charge for cloud services on a consumption basis, federal procurement regulations have not kept pace. Cloud computing charges often accrue on a charge per use basis. Contracting Officers will need to work with the finance organization, OCAO, and legal counsel to determine what is the best "color of money" to use when funding a cloud contract for your Ordering Activity.

Some points you may consider in your discussions:

 Funds will be obligated via Task Orders issued by an Ordering Contracting Officer for authorized Ordering Activities, in accordance with the ordering activity's specific rules, regulations, policies and procedures.

The Ordering Activity Ordering Contracting Officer shall engage the Ordering Activity Financial Management Office and Program Management Office to ensure adequate and proper funds are available for Task Order placement.

- Capital Expenditure (CapEx) funds: (e.g., investment, procurement, or research and development funds) may sometimes be used to acquire and upgrade on premises (non-cloud) computer hardware and software for the longer term. Ordering activities must not circumvent appropriations regulations and use funds approved for CapEx to procure cloud services. Work with the finance organization, OCAO and legal counsel to determine if CapEx can be used and how far in advance they can be budgeted.
- Operations Expenditure (OpEx) funds: (e.g., operations and maintenance or operations and sustainment funds) are used for more predictable, shorter term expenses. OpEx funds may be ideal for cloud, due to the month to month nature of cloud expenses. This is a natural transition from CapEx funding models as Ordering Activities decommission their data centers and begin using a cloud funding model with OpEx funds.

Congress annually distributes the year's budgetary funds to appropriated Ordering Activities which are generally tied to one fiscal year. It is best practice to consult your Ordering Activities CFO, legal counsel, fiscal law experts, and contracting officer(s) to understand using no-year, multi-year, or 1 year funds and check (10 U.S.C 2306a and 41 U.S.C 3903) citations that might allow 1 year funds to fund multi-year FAR 17.1 contracts. Cloud services aren't a one and done expense; rather something to refine, optimize, spin up and down, and leverage as you build out more of your cloud environment. Flexible working capital funds that span years have been found to work best, if your Ordering Activity has access to them.

#### 5. Issue a Solicitation

When market research and acquisition planning steps have been completed, and funding is secured, it is time to develop and publish a cloud solicitation. When the government wants to buy a good or service, it issues a solicitation. Solicitations are documents that make the government's requirements clear so that businesses can submit competitive bids.

#### a. eBuy:

In accordance with FAR 8.405-2, Ordering Activities may use <u>GSA's electronic RFQ system</u>, <u>called eBuy</u> (the only electronic way to publish a solicitation against SIN 518210C) at no cost. Posting the RFQ on e-Buy allows all schedule contractors offering SIN 518210C an opportunity to submit a quote. GSA's eBuy tool facilitates the process, all while keeping Ordering Activities FAR compliant.

\*Note that use of eBuy is not required in all circumstances and if ordering above the Simplified Acquisition Threshold (SAT), Ordering Activities need only "reasonably ensure that quotes will be received from at least three contractors that can fulfill the requirements" (see FAR 8.405-2(c)(3)(iii)(B)).

- Log onto <u>ebuy.gsa.gov</u>
- Select the contractors and/or GSA MAS SINs who your Ordering Activity want to receive the solicitation
- Release the solicitation to your selected contractors

Ordering activities can get assistance with eBuy via the Ordering Activity's <u>GSA National Account Manager (NAM)</u>, <u>Customer Service Director (CSD)</u> or their respective GSA MAS Contracting Officer (CO). If you need help getting connected with a GSA NAM/CSD or GSA MAS CO, email the GSA Cloud Team at <u>cloudinfo@gsa.gov</u>.

# b. SAM.gov:

The System for Award Management, or SAM, is a government-wide portal that consolidates the capabilities of multiple systems and information sources used by the Federal government in conducting the acquisition and financial assistance. Anyone interested in doing business with the government can use this system to search opportunities. Opportunities include pre-solicitation notices, solicitation notices, award notices, and sole source notices.

# 6. Evaluation of Responses

There are multiple technical metrics to consider when evaluating the different cloud service offerings submitted in offeror/contractor quotes: performance, security, and agility, to name a few. Proposed individual cloud UPCs are difficult to compare on a one-to-one basis. Thus, many Ordering Activities have used the best value method to trade off one metric for another. By providing a selection, Ordering Activities are afforded the opportunity to fulfill their requirements with the offerings that constitute the best value and that meet their needs at the lowest overall cost.

Example metrics to consider for laaS/PaaS cloud service offerings:

#### Security

- General Services Administration (GSA), Federal Risk and Authorization
   Management Program (FedRAMP) Impact Level (IL) Moderate Authorization
- Department of Defense Cloud Computing Security Requirements Guide (SRG)
   Impact Level (IL) 2 Authorization
- Cybersecurity Maturity Model Certification (CMMC) (e.g., Level 2) or Third-Party
   Cybersecurity Audit of Computer Systems and Practices
- Supply Chain Risk Management (SCRM) Plan
- Participation and operational compatibility in Government cybersecurity monitoring and reporting programs (e.g., Department of Homeland Security (DHS) Continuous Diagnostic and Mitigation (CDM) Program).

#### Technical

- Availability and Reliability
- Services aligning with and facilitating Zero Trust Architecture (ZTA)

#### Operational

- On-Demand Self-Service interface that allows end users (e.g., Government) to independently operate (e.g., start, suspend, terminate), manage (e.g., budget, schedule, scale), and monitor (e.g., utilization, performance, costs, users) services
- Measured Services that allow for pay-as-you-go, pay-per-use, or charge-per-use for services.

It is important to note, the evaluation process **MUST** align with the technical evaluation factors specified in the solicitation.

#### 7. Make an Award

GSA's Acquisition Letter (AL) MV-21-06, Procurement of Cloud Computing on a Consumption Basis under the Federal Supply Schedule (FSS) program and Supplement 1, dated March 18, 2022, establishes special ordering procedures for the procurement of cloud computing on a consumption basis for the Federal Supply Schedule program. As a result of this AL, GSAR Clause 552.238-199 Special Ordering Procedures Applicable when Procuring Cloud Computing on a Consumption Basis (MAR 2022) should be included in the awarded BPA/Task Order (See Appendix A). This will add a requirement that will give the authorized Ordering Activity access to commercial sale pricelist tools to help in accomplishing the above tasks.

# Appendix A: GSAR Clause 552.238-199

# [GSAR Clause 552.238-199 Special Ordering Procedures Applicable when Procuring Cloud Computing on a Consumption Basis

As directed by Acquisition Letter MV-21-06, GSA FSS Contracting Officers shall insert the following clause in contracts offering cloud computing services on a consumption basis under Special Item Number (SIN) 518210C (previously 132-40) or successor SINs within the Information Technology (IT) Category (previously Schedule 70):

SPECIAL ORDERING PROCEDURES APPLICABLE WHEN PROCURING CLOUD COMPUTING ON A CONSUMPTION BASIS (MAR 2022)

#### (a) Definitions.

- (1) "Capital asset" has the meaning given the term by Office of Management and Budget (OMB) Circular A-11 Capital Programming Guide and any amendatory or superseding document(s) thereto.
- (2) "Cloud computing" has the meaning given the term by the National Institute of Standards and Technology in Special Publication (SP) 800–145 and any amendatory or superseding document(s) thereto.
- (3) "Consumption basis" or "consumption-based" means any offering that is metered with charges that accrue on a predetermined periodic basis (e.g., per second, minute, hour, week, month, or another per-unit basis) and is billed based on actual usage during an elapsed period with predetermined pricing or discounts.
- (4) "Requirements task order" means a task order that provides for filling all actual purchase requirements of a designated Ordering Activity during a specified contract period, with performance by the contractor being scheduled when the Ordering Activity awards, or exercises options for, individual contract line items (CLINs) under the task order.
  - (i) This task order type is appropriate when the Ordering Activity anticipates recurring requirements but cannot predetermine the precise quantities of services that it will need during a definite period.
  - (ii) A requirements task order issued under a FSS contract is a single contract award as defined FAR 2.101. Individual CLINs executed and funded under this task order type are not considered to be second-tier instruments issued under the awarded task order.
  - (iii) A requirements task order is not a requirements contract as described at FAR 16.503.

#### (b) Ordering procedures.

- (1) FAR 8.403(b) provides that GSA may establish special ordering procedures for a particular FSS offering.
- (2) The procedures in FAR subpart 8.4 apply to this contract, with the exceptions listed in this clause. If a requirement in this clause is inconsistent with FAR subpart 8.4, this clause takes precedence pursuant to FAR 8.403(b).

#### (c) Applicability.

- (1) The Ordering Activity Contracting Officer shall follow the procedures contained within this clause when placing an incrementally funded task order under this contract for cloud computing services on a consumption basis.
- (2) The Ordering Activity Contracting Officer is permitted, but not required to, use the procedures contained within this clause for task orders that are not incrementally funded.
- (3) The Ordering Activity Contracting Officer shall not use the procedures contained within this clause for the acquisition, maintenance, or modification of capital assets.

#### (d) Pricing.

- (1) The Ordering Activity Contracting Officer shall establish a task order ceiling price for all estimated requirements.
- (2) All cloud computing services offered under this FSS contract are considered fixed-price.
- (e) Task order type. The Ordering Activity Contracting Officer shall use a requirements task order for cloud computing services procured on a consumption basis in accordance with this clause.
  - (1) This task order type may include other contract types, such as firm-fixed-price, when procuring other offerings under this contract that are not being procured on a consumption-basis.
  - (2) Estimates for cloud computing services to be procured on a consumption basis.
    - (i) The Ordering Activity Contracting Officer must state a realistic estimate of—
      - (A) The consumption of cloud computing services in the task order solicitation; and
      - (B) The total amount in dollars to be expended on cloud consumption in the task order.
    - (ii) This estimate is not a representation to an Offeror or Contractor that

the estimated consumption will be required or ordered, or that conditions affecting requirements will be stable or normal.

- (iii) The Ordering Activity Contracting Officer may obtain the estimate from records of previous requirements and consumption, or by other means, and should base the estimate on the most current information available.
- (iv) If the Government's requirements do not meet this estimate, that fact shall not constitute the basis for an equitable price adjustment.
- (3) All CLINs within the task order must include a defined scope with all services priced at the time of award.
- (f) Incremental funding.
  - (1) The Ordering Activity may allot funds incrementally as the bona fide need arises for predefined and established fixed-priced procurement requirements on individual CLINs.
  - (2) The Ordering Activity shall ensure sufficient funds are allotted to the task order—
    - (i) At the time of award to cover the total amount payable to the Contractor for the awarded CLIN(s); and
    - (ii) At the time an optional CLIN is exercised to cover the total amount payable to the Contractor for that optional CLIN.
  - (3) Nothing in this clause shall be construed to supersede the Ordering Activity's contract funding policies.
- (g) Consumption monitoring.
  - (1) The Contractor shall—
    - (i) Provide, at no additional cost to the Government, access to tools that enable the Government to track its usage of cloud computing services offered on a consumption basis; or
    - (ii) Notify the Ordering Activity Contracting Officer when total consumption reaches—
      - (A) 50 percent and 75 percent of the ceiling price for each CLIN for consumption-based cloud computing services, or other milestones as agreed
      - upon by the Contractor and the Ordering Activity Contracting Officer; and
      - (B) 50 percent and 75 percent of the task order ceiling price, or other milestones as agreed upon by the Contractor and the Ordering Activity Contracting Officer.

- (2) The Ordering Activity Contracting Officer shall determine that the consumption monitoring capabilities offered by the Contractor will enable the Government to adequately track its incurred costs before awarding a task order in accordance with this clause.
- (h) Limitation of funds.
  - (1) The Government will not be obligated to pay the Contractor any amount in excess of the ceiling price in the task order, and the Contractor shall not be obligated to continue performance if doing so would exceed the ceiling price set forth in the task order.
  - (2) The Ordering Activity Contracting Officer may use a Limitation of Funds clause when CLINs under the task order are incrementally funded.
- (i) Scope reviews.
  - (1) The Ordering Activity Contracting Officer is encouraged to request a scope review from the GSA Federal Acquisition Service (FAS) Office of Information Technology Category (ITC) before placing a task order in accordance with these special ordering procedures.
  - (2) The purpose of a scope review is to analyze whether the planned acquisition is—
    - (i) compatible with the scope of Special Item Number (SIN) 518210C (previously 132-40) or successor SINs;
    - (ii) utilizing recommended best practices; and
    - (iii) not for the acquisition, maintenance, or modification of capital Assets.
  - (3) The Ordering Activity Contracting Officer may request a scope review by contacting FAS ITC at cloud-sin-rfi@gsa.gov.

(End of clause)]

# Appendix B: Examples of Consumption Based Ordering

CSP cloud service catalogs are changing quickly and constantly and many Ordering Activities want to take advantage of any new emerging technology as soon as it is available. An Ordering Activity may need an authorized contractor to have the new service(s) added to their GSA MAS Service Catalog if they aren't listed as an awarded CLIN. For currently awarded TO's, the CO will need to negotiate with the authorized contractor before modifying the TO to add the new services and pricing.

Below are examples of the implementation of a CLIN structure for the acquisition of cloud compute (i.e., IaaS) services based on the addition of GSAR Clause 552.238-199 *Special Ordering Procedures Applicable when Procuring Cloud Computing on a Consumption Basis* into the MAS Solicitation. The examples and analysis are not exhaustive and are meant to give an Ordering Activity only the guidance of what's possible.

#### 1. Fixed Price Non-Term Cloud Computing Services (e.g., On-Demand)

#### Awarded CLINs:

- have a defined scope (e.g., functional, technical) and are fully funded at time of award with funded values being the ceiling value of the CLIN.
- Examples below in Figures 1-3: (CLINs 1000, 2000)
- Sub-CLINs Under the Awarded CLINs there are Sub-CLINs with explicitly defined scope (i.e., explicit compute type) that falls within the scope of the Awarded CLIN.
- The Sub-CLINs are not individually funded at time of award, all funding remains obligated at the Awarded CLIN level.
- The Sub-CLINs with the explicitly defined scope lists the specific compute service (i.e., "cloud reservation" type) with negotiated and awarded unit cost and the unit of measure. The quantity is left empty at time of award.
- As the Ordering Activity uses the listed Sub-CLINs compute services the Ordering Activity is invoiced in arrears on a monthly basis. The invoice lists the quantity of services used for each Sub-CLIN and provides an incurred cost for each explicit service. The total incurred costs for all Sub-CLINs is then subtracted from the Award CLIN resulting in the balance of funding (i.e., remaining funding on the CLIN).
- Under this model the Ordering Activity has documented what cloud services have been awarded (i.e., on contract) and the awarded price per listed unit of measure for that service (i.e., Fixed Price). This then allows consumed (i.e., used) services to be traceable at time of invoice. The Ordering Activity's usage is cumulative month to month and each invoice

will list the cumulative usage (i.e., quantity) for each Sub-CLIN.

- Optional CLINs Not funded at time of award. The OACO has to execute a contract modification to execute and fully fund the Optional CLIN.
  - Optional CLINs allow the OACO to incrementally fund services by executing and fully funding each optional CLIN as funds are expensed. This limits the risk that a significant amount of funding will remain on the contract at the end of a period of performance and require de-obligation contacting actions where the de-obligated funding may not be available for re-obligation to another CLIN or contract (e.g., 1 Year funds).
  - Examples below in Figures 1-3: (CLIN 2100)
  - Sub-CLINs The same logic for an awarded CLINs Sub-CLIN above applies here.
  - In the example below the OCO executes the optional CLIN sometime in October when the OACO is notified that CLIN 2000 is 50% or 75% expended (i.e., costs incurred).
  - When the OACO executes the optional CLIN 2100, that is a duplication of CLIN 2000, there is no disruption in services when CLIN 2000 is fully expended. The ongoing incurred costs simply transition to CLIN 2100 without interruption.

#### Example A: Non-Term (On-Demand) Cloud Compute

In Figures 1-3 below, there are 3 monthly invoices for 2 awarded CLINs and 1 optional CLIN. The yellow filled cells in Figure 2 indicate quantity changes between the September and October invoices (i.e., October usage), and the orange fill in Figure 3 indicate the quantity changes between October and November (i.e., November usage). From September to November the awarded CLINs balances decreased to indicate the Ordering Activities continued usage of services.

[Figure 1] September Invoice (awarded CLINs being utilized. Optional CLIN remains unfunded).

CLIN Type	CLIN Number	CLIN Scope	Unit Cost Unit of Measure		Quantity	Incurred Cost
Awarded Sub-CLIN	1001	a1.medium	\$0.0255	Compute / Hr	100	\$2.55
Awarded Sub-CLIN	1002	a1.large	\$0.0510	Compute / Hr	50	\$2.55
Awarded Sub-CLIN	1003	a1.xlarge	\$0.1020	Compute / Hr	23	\$2.35
Awarded Sub-CLIN	1004	a1.2xlarge	\$0.2040	Compute / Hr	1000	\$204.00
Awarded Sub-CLIN	1005	a1.4xlarge	\$0.4080	Compute / Hr	5004	\$2,041.63
Awarded Sub-CLIN	2001	p3.2xlarge	\$3.0600	Compute / Hr	2500	\$7,650.00
Awarded Sub-CLIN	2002	p3.8xlarge	\$12.2400	Compute / Hr	567	\$6,940.08
Awarded Sub-CLIN	2003	p3.16xlarge	\$24.4800	Compute / Hr	354	\$8,665.92

CLIN Type	CLIN Number	CLIN Scope	Unit Cost	Unit of Measure	Quantity	Incurred Cost
Optional Sub-CLIN	2101	p3.2xlarge	\$3.0600	Compute / Hr	0	\$0.00
Optional Sub-CLIN	2102	p3.8xlarge	\$12.2400	Compute / Hr	0	\$0.00
Optional Sub-CLIN	2103	p3.16xlarge	\$24.4800	Compute / Hr	0	\$0.00

End of Month Balances at the parent CLIN level for Figure 1.

CLIN Type	CLIN Number	CLIN Scope	Funded	Balance
Awarded CLIN	1000	General Compute	\$100,000.00	\$97,746.92
Awarded CLIN	2000	Accelerated Computing	\$50,000.00	\$26,744.00
Optional CLIN	2100	Accelerated Computing	\$0.00	\$0.00

[Figure 2] October Invoice (awarded CLINs continue to draw down on funded ceiling. Optional CLIN remains unfunded but may be activated by OACO as the consumption of CLIN 2000 hit 50% of the ceiling price)

CLIN Type	CLIN Number	CLIN Scope	Unit Cost	Unit of Measure	Quantity	Incurred Cost
Awarded Sub-CLIN	1001	a1.medium	\$0.0255	Compute / Hr	100	\$2.55
Awarded Sub-CLIN	1002	a1.large	\$0.0510	Compute / Hr	50	\$2.55
Awarded Sub-CLIN	1003	a1.xlarge	\$0.1020	Compute / Hr	23	\$2.35
Awarded Sub-CLIN	1004	a1.2xlarge	\$0.2040	Compute / Hr	1000	\$204.00
Awarded Sub-CLIN	1005	a1.4xlarge	\$0.4080	Compute / Hr	11004	\$4,489.63
Awarded Sub-CLIN	2001	p3.2xlarge	\$3.0600	Compute / Hr	5265	\$16,110.90
Awarded Sub-CLIN	2002	p3.8xlarge	\$12.2400	Compute / Hr	567	\$6,940.08
Awarded Sub-CLIN	2003	p3.16xlarge	\$24.4800	Compute / Hr	354	\$8,665.92
Optional Sub-CLIN	2101	p3.2xlarge	\$3.0600	Compute / Hr	0	\$0.00
Optional Sub-CLIN	2102	p3.8xlarge	\$12.2400	Compute / Hr	0	\$0.00
Optional Sub-CLIN	2103	p3.16xlarge	\$24.4800	Compute / Hr	0	\$0.00

End of Month Balances at the parent CLIN level for Figure 2.

CLIN Type	CLIN Number	CLIN Scope	Funded	Balance
Awarded CLIN	1000	General Compute	\$100,000.00	\$95,298.92
Awarded CLIN	2000	Accelerated Computing	\$50,000.00	\$18,283.10
Optional CLIN	2100	Accelerated Computing	\$0.00	\$0.00

[Figure 3] November Invoice (awarded CLINs continue to draw down on the funded ceiling. Optional CLIN 2100 has been activated and funded).

CLIN Type	CLIN Number	CLIN Scope	Unit Cost	Unit of Measure	Quantity	Incurred Cost
Awarded Sub-CLIN	1001	a1.medium	\$0.0255	Compute / Hr	110	\$2.81
Awarded Sub-CLIN	1002	a1.large	\$0.0510	Compute / Hr	50	\$2.55
Awarded Sub-CLIN	1003	a1.xlarge	\$0.1020	Compute / Hr	23	\$2.35
Awarded Sub-CLIN	1004	a1.2xlarge	\$0.2040	Compute / Hr	1000	\$204.00
Awarded Sub-CLIN	1005	a1.4xlarge	\$0.4080	Compute / Hr	26004	\$10,609.63
Awarded Sub-CLIN	2001	p3.2xlarge	\$3.0600	Compute / Hr	11239	\$34,391.34
Awarded Sub-CLIN	2002	p3.8xlarge	\$12.2400	Compute / Hr	567	\$6,940.08
Awarded Sub-CLIN	2003	p3.16xlarge	\$24.4800	Compute / Hr	354	\$8,665.92
Optional Sub-CLIN	2101	p3.2xlarge	\$3.0600	Compute / Hr	2456	\$7,515.36
Optional Sub-CLIN	2102	p3.8xlarge	\$12.2400	Compute / Hr	0	\$0.00
Optional Sub-CLIN	2103	p3.16xlarge	\$24.4800	Compute / Hr	0	\$0.00

End of Month Balances at the parent CLIN level for Figure 3.

CLIN Type	CLIN Number	CLIN Scope	Funded	Balance
Awarded CLIN	1000	General Compute	\$100,000.00	\$89,178.67
Awarded CLIN	2000	Accelerated Computing	\$50,000.00	\$2.66
Optional CLIN	2100	Accelerated Computing	\$50,000.00	\$42,484.64

#### 2. Fixed Price (FP) - Term Cloud Computing Services (e.g., "cloud reservations")

- Awarded CLINs Under the (FP) Term Cloud Computing Services (e.g., "cloud reservations") there are only Awarded CLINs.
- Optional CLINs Not permitted.

Cloud reservations - are defined by 3 parameters: Service, Cost, and Term Period. The Ordering Activity is locked into a set cost for a defined service regardless of whether or not the Ordering Activity uses the service.

As a result, only an OCO can execute/activate these services since only a warranted Contracting Officer can enter into, administer, and/or terminate contracts within the limits of their authority.

#### Example B: Term ("cloud reservations") Cloud Compute (laaS)

CLINs are fully funded at time of execution and should be invoiced monthly or in accordance with the payment terms for the cloud reservations.

In this example the contract was awarded in September making August the 12 months. For CLINs 4000 - 4004 the 1 year Term Cloud Computing Services have been fully expended and the balance is \$0.00.

FFP CLINs should be used for Ordering Activity baseline (e.g., steady state) cloud services in order to maximize cost savings.

[Figure 1] September Invoice (incurred cost increases as balance decreases steadily over time).

CLIN Type	CLIN Number	CLIN Scope	Unit Cost	Unit of Measure	Quantity	Incurred Cost	Funded	Balance
Awarded CLIN	4000	General Compute - a1.medium	\$11.7500	RI Monthly Fee (1- Year)	1	\$11.75	\$141.00	\$129.25
Awarded CLIN	4001	General Compute - a1.large	\$23.4300	RI Monthly Fee (1- Year)	1	\$23.43	\$281.16	\$257.73
Awarded CLIN	4002	General Compute - a1.xlarge	\$46.9400	RI Monthly Fee (1- Year)	1	\$46.94	\$563.28	\$516.34
Awarded CLIN	4003	General Compute - a1.2xlarge	\$93.8100	RI Monthly Fee (1- Year)	1	\$93.81	\$1,125.72	\$1,031.91
Awarded CLIN	4004	General Compute - a1.4xlarge	\$187.6100	RI Monthly Fee (1- Year)	1	\$187.61	\$2,251.32	\$2,063.71
Awarded CLIN*	5000	General Compute - a1.medium	\$8.0300	RI Monthly Fee (3- Year)	1	\$8.03	\$289.08	\$281.05
Awarded CLIN*	5001	General Compute - a1.large	\$16.0600	RI Monthly Fee (3- Year)	1	\$16.06	\$578.16	\$562.10
Awarded CLIN*	5002	General Compute - a1.xlarge	\$32.1900	RI Monthly Fee (3- Year)	1	\$32.19	\$1,158.84	\$1,126.65
Awarded CLIN*	5003	General Compute - a1.2xlarge	\$64.3100	RI Monthly Fee (3- Year)	1	\$64.31	\$2,315.16	\$2,250.85
Awarded CLIN*	5004	General Compute - a1.4xlarge	\$128.7000	RI Monthly Fee (3- Year)	1	\$128.70	\$4,633.20	\$4,504.50

# [Figures 2-3] October-November Invoices (incurred cost increases as balance decreases steadily over time).

#### **October Invoice**

CLIN	CLIN	CLIN	Unit Cost	Unit of	Quantity	Incurred	Funded	Balance
Type	Number	Scope		Measure		Cost		
Awarded	4000	General	\$11.7500	RI Monthly	1	\$23.5000	\$141.00	\$117.50
CLIN		Compute -		Fee (1-				
		a1.medium		Year)				
Awarded	4001	General	\$23.4300	RI Monthly	1	\$46.8600	\$281.16	\$234.30
CLIN		Compute -		Fee (1-				
		a1.large		Year)				
Awarded	4002	General	\$46.9400	RI Monthly	1	\$93.8800	\$563.28	\$469.40
CLIN		Compute -		Fee (1-				
		a1.xlarge		Year)				
Awarded	4003	General	\$93.8100	RI Monthly	1	\$187.6200	\$1,125.72	\$938.10
CLIN		Compute -		Fee (1-				
		a1.2xlarge		Year)				
Awarded	4004	General	\$187.6100	RI Monthly	1	\$375.2200	\$2,251.32	\$1,876.10
CLIN		Compute -		Fee (1-				
		a1.4xlarge		Year)				
Awarded	5000	General	\$8.0300	RI Monthly	1	\$16.0600	\$289.08	\$273.02
CLIN*		Compute -		Fee (3-				
		a1.medium		Year)				
Awarded	5001	General	\$16.0600	RI Monthly	1	\$32.1200	\$578.16	\$546.04
CLIN*		Compute -		Fee (3-				
		a1.large		Year)				
Awarded	5002	General	\$32.1900	RI Monthly	1	\$64.3800	\$1,158.84	\$1,094.46
CLIN*		Compute -		Fee (3-				
		a1.xlarge		Year)				
Awarded	5003	General	\$64.3100	RI Monthly	1	\$128.6200	\$2,315.16	\$2,186.54
CLIN*		Compute -		Fee (3-				
		a1.2xlarge		Year)				
Awarded	5004	General	\$128.7000	RI Monthly	1	\$257.4000	\$4,633.20	\$4,375.80
CLIN*		Compute -		Fee (3-				
		a1.4xlarge		Year)				

#### **November Invoice**

CLIN Type	CLIN Number	CLIN Scope	Unit Cost	Unit of Measure	Quantity	Incurred Cost	Funded	Balance
Awarded CLIN	4000	General Compute - a1.medium	\$11.7500	RI Monthly Fee (1- Year)	1	\$35.2500	\$141.00	\$105.75
Awarded CLIN	4001	General Compute - a1.large	\$23.4300	RI Monthly Fee (1- Year)	1	\$70.2900	\$281.16	\$210.87
Awarded CLIN	4002	General Compute - a1.xlarge	\$46.9400	RI Monthly Fee (1- Year)	1	\$140.8200	\$563.28	\$422.46

CLIN Type	CLIN Number	CLIN Scope	Unit Cost	Unit of Measure	Quantity	Incurred Cost	Funded	Balance
Awarded CLIN	4003	General Compute - a1.2xlarge	\$93.8100	RI Monthly Fee (1- Year)	1	\$281.4300	\$1,125.72	\$844.29
Awarded CLIN	4004	General Compute - a1.4xlarge	\$187.6100	RI Monthly Fee (1- Year)	1	\$562.8300	\$2,251.32	\$1,688.49
Awarded CLIN*	5000	General Compute - a1.medium	\$8.0300	RI Monthly Fee (3- Year)	1	\$24.0900	\$289.08	\$264.99
Awarded CLIN*	5001	General Compute - a1.large	\$16.0600	RI Monthly Fee (3- Year)	1	\$48.1800	\$578.16	\$529.98
Awarded CLIN*	5002	General Compute - a1.xlarge	\$32.1900	RI Monthly Fee (3- Year)	1	\$96.5700	\$1,158.84	\$1,062.27
Awarded CLIN*	5003	General Compute - a1.2xlarge	\$64.3100	RI Monthly Fee (3- Year)	1	\$192.9300	\$2,315.16	\$2,122.23
Awarded CLIN*	5004	General Compute - a1.4xlarge	\$128.7000	RI Monthly Fee (3- Year)	1	\$386.1000	\$4,633.20	\$4,247.10

# [Figure 4] August Invoice (at month 12) (incurred cost has reached funded amount and balance is 0.00 for 1-Year) (3-Year is at 1/3 spent).

CLIN Type	CLIN Number	CLIN Scope	Unit Cost	Unit of Measure	Quantity	Incurred Cost	Funded	Balance
Awarded CLIN	4000	General Compute - a1.medium	\$11.7500	RI Monthly Fee (1- Year)	1	\$141.0000	\$141.00	\$0.00
Awarded CLIN	4001	General Compute - a1.large	\$23.4300	RI Monthly Fee (1- Year)	1	\$281.1600	\$281.16	\$0.00
Awarded CLIN	4002	General Compute - a1.xlarge	\$46.9400	RI Monthly Fee (1- Year)	1	\$563.2800	\$563.28	\$0.00
Awarded CLIN	4003	General Compute - a1.2xlarge	\$93.8100	RI Monthly Fee (1- Year)	1	\$1,125.7200	\$1,125.72	\$0.00

CLIN Type	CLIN Number	CLIN Scope	Unit Cost	Unit of Measure	Quantity	Incurred Cost	Funded	Balance
Awarded CLIN	4004	General Compute - a1.4xlarge	\$187.6100	RI Monthly Fee (1- Year)	1	\$2,251.3200	\$2,251.32	\$0.00
Awarded CLIN*	5000	General Compute - a1.medium	\$8.0300	RI Monthly Fee (3- Year)	1	\$96.3600	\$289.08	\$192.72
Awarded CLIN*	5001	General Compute - a1.large	\$16.0600	RI Monthly Fee (3- Year)	1	\$192.7200	\$578.16	\$385.44
Awarded CLIN*	5002	General Compute - a1.xlarge	\$32.1900	RI Monthly Fee (3- Year)	1	\$386.2800	\$1,158.84	\$772.56
Awarded CLIN*	5003	General Compute - a1.2xlarge	\$64.3100	RI Monthly Fee (3- Year)	1	\$771.7200	\$2,315.16	\$1,543.44
Awarded CLIN*	5004	General Compute - a1.4xlarge	\$128.7000	RI Monthly Fee (3- Year)	1	\$1,544.4000	\$4,633.20	\$3,088.80

<sup>\*</sup> Allowable only under Multiple Year Contracts (FAR 17.1) where the Period of Perfromance (PoP) is 3 years or longer.

Other Notes when dealing with CLINs and Authorized Contractors:

- "Broad" all encompassing CLINs In regard to Line Items, FAR 8-404(j) "Line Items" states, "When placing orders or establishing BPAs, ordering activities shall reference the special item number and the corresponding line or subline item awarded (established per 4.1005) in the schedule." So, the FAR requires that the Line Item on the Ordering Activity's Task/Purchase Order references the line or subline on the Contractor's GSA Schedule Pricelist. Unless the GSA Schedule Pricelist has awarded a specific line-item price for a "catalog of available cloud services",i.e.., "Broad CLIN", the Ordering Activity may not be able to award an Order for a "Broad CLIN." The Order would need to list the specific CLINs awarded by the Ordering Activity that map to specific items listed on the awarded GSA Schedule Pricelist.
- "Cloud Marketplaces" This is a selection of offerings that may support the workload and cloud requirements of an Ordering Activity. If using, the Ordering Activity needs to ensure the Line Item they are enabling from the marketplace is in the original requirements. Just because you have the ability to go to a CSP and "turn on" new financial management or HR type software with just a click, doesn't mean it is within scope of your original stated contract requirements.