**Special Item Number 518210C - Cloud Computing and Cloud-Related IT Professional Services
Specific Information for Offerors**

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# Table 1: SIN Description

| **Cloud Computing Services** | **Cloud-Related IT Professional Services** |
| --- | --- |
| * Cloud computing services must be commercially available per the Federal Acquisition Regulations (FAR) definition for a "commercial service".
* Cloud computing services must meet the five essential characteristics of: on-demand self-service, broad network access, resource pooling, rapid elasticity, and measured service per the National Institute for Standards and Technology Special Publication 800-145 The NIST Definition of Cloud Computing (NIST SP 800-145).
* Cloud computing services must meet at least one of the deployment models: private, public, community, or hybrid per the NIST SP 800-145.
* Cloud computing services must meet at least one of the service models: Infrastructure as a Service (IaaS), Platform as a Service (PaaS), and Software as a Service (SaaS) per NIST SP 800-145).
* Physical hardware, non-cloud software per the NIST definition, and other artifacts acquired to support the physical construction of a private or any other cloud are not within the scope of this SIN.
 | * Cloud focused labor categories (LCATs) that provide labor that supports the Ordering Activity's adoption, migration, governance, and / or management of cloud computing services are within scope of this SIN.
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# INSTRUCTIONS ON HOW TO COMPLETE CLOUD RELATED IT PROFESSIONAL SERVICES PRICING PROPOSAL TEMPLATE (PPT)

* 1. Cloud focused labor category titles
		1. All cloud focused labor categories (LCATs) must include per row / line "cloud" in the labor category title such as cloud architect, cloud manager.
	2. Cloud focused labor category descriptions
		1. All cloud focused labor categories (LCATs) must include per row / line "cloud" in the labor category description.

# INSTRUCTIONS ON HOW TO COMPLETE CLOUD COMPUTING SERVICES PRICING PROPOSAL TEMPLATE (PPT)

* 1. These instructions are provided to assist Offerors in the generation of their cloud computing services PPT spreadsheet.
	2. Cloud computing services, manufacturer name
		1. All cloud computing services must identify per row / line the manufacturer name which is the Cloud Service Provider (CSP). The manufacturer name must only be the manufacturer's legal name and not abbreviations, acronyms, division, etc.
	3. Cloud computing services, manufacturer part number
		1. All cloud computing services must identify per row / line item the manufacturer part number that is the CSPs unique identifier. The manufacturer part number must not be altered or changed by the offeror.
	4. Cloud computing services, unit or measure
		1. All cloud computing services must identify per row / line the cloud computing services that are available for ordering on a consumption basis by ensuring there is a value in the unit of measure (UOM) / unit of issue (UOI) column.
		2. All cloud computing services must identify per row / line the appropriate UOM / UOI that meets the essential characteristic of "measured service" per NIST SP 800-145.
			1. A “Consumption basis” or “consumption-based” UOM / UOI means any offering that is metered with charges that accrue on a predetermined basis such as per second, per hour, per month, per transaction, per operation, or another per-unit basis.
		3. Explain how the offering allows Ordering Activities to realize the full benefit of “pay as you go” / consumption models.
	5. Cloud computing services, pricing
		1. All cloud computing services must identify per row/line a definitized price that aligns with the identified unit of measure.
			1. Cloud computing services prices can not be based on another variable such as percent of cost, percent of spend, or other similar pricing models as those pricing models would be calculated on undefinitized prices.
			2. Cloud computing services prices can not be based on credits, deposits on account, gift cards, tokens, vouchers, or other similar pricing models.
		2. IaaS and PaaS cloud services prices must be based on payment in arrears.
			1. IaaS and PaaS cloud services can not be based on prepayment, pre purchase, upfront payment, or other similar pricing model.
		3. SaaS cloud services prices may be based on payment in arrears or upfront payment.
			1. When SaaS cloud computing services prices are based on upfront payment the following criteria must be met.
				1. Access to the SaaS cloud services/software is granted contemporaneously with payment (i.e., delivery of the license is made at time of payment);
				2. The subscription/license is acquired on a fixed-price or fixed-price with economic price adjustment basis even if other portions of the task order or contract are not fixed price;
				3. The subscription/license is priced at a single seat, multi-seat, unit, or subscription price covering a fixed term, defined as “a limited period of time”;
				4. The subscription/license’s pricing and billing model allows for no utilization or consumption metric other than quantity to affect the costs incurred over the negotiated term;
				5. The subscription/license does not require any upfront payment other than the fixed seat, unit, or subscription cost as a prerequisite for access or a pricing discount; and
				6. Within end user or other license agreements, the subscription/license service is continuous and uninterrupted for the negotiated term of access to the subscription/license.

# INSTRUCTIONS ON HOW TO DOCUMENT HOW CLOUD COMPUTING SERVICES MEET THE FIVE ESSENTIAL CHARACTERISTICS

1. These instructions are provided to assist offerors / contractors in the development of their documentation in how their cloud computing services meet the five essential characteristics per NIST SP 800-145.
2. Offerors / contractors must submit the five essential characteristics documentation for each proposal submission for cloud computing services.
	1. Offerors / contractors may offer only one service model or any combination of services models.
	2. Offerors / contractors must state which cloud computing service model(s), if any, is/are being proposed (i.e., IaaS, PaaS, SaaS).
	3. Offerors / contractors must state which cloud computing deployment model(s), if any, is/are being proposed (i.e., private, public, community, hybrid).
	4. Offerors / contractors must address how the cloud computing services met the five essential characteristics:
		1. On-demand self-service
		2. Broad network access
		3. Resource pooling
		4. Rapid elasticity
		5. Measure service
	5. The five essential characteristics documentation must be complete and adequate according to evaluation criteria.
		1. Evaluation criteria are listed in *Table 2: Cloud Computing Services Description Requirement.*
3. **GUIDANCE FOR OFFERORS / CONTRACTORS FIVE ESSENTIAL CHARACTERISTICS**

This guidance assists in the development of the required responses to the evaluation criteria on how the offerings meet the NIST five essential cloud characteristics.

# Table 2: Guidance on how to generate the "statement how the offer / modification meets the five essential characteristics"

| **Cloud Characteristic** | **Description[[1]](#footnote-0)** | **Guidance** |
| --- | --- | --- |
| 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."
 | * Explain how ordering activities can unilaterally (de)provision services without requiring human, offeror, or CSP intervention.
* Explain how this characteristic is implemented by the offeror. Examples include an online console, portal, or command line interface.
 |
| 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)."
 | * Explain how the offering is connected to the online console, portal, or command line interface to provide the on-demand self service and the cloud computing service.
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| 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." | * Explain how the offeror pools their resources in a multi-tenant environment.
* Explain how the offeror's pooling of resources distinguishes their offering from simple offsite hosting.
* Ordering activities may request dedicated physical hardware, software, or platform resources to access a private cloud deployment service. However, the provisioned cloud resources must be drawn from a common pool and automatically allocated on request.
 |
| 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."
 | * Explain how unilateral (de)provisioning by the Ordering Activity is accomplished without delays introduced by human, offeror, or CSP intervention.
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| Measured Service | * "Cloud systems automatically control and optimize resource use by leveraging a metering capability1 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."
* "Typically this is done on a pay-per-use or charge-per-use basis."
 | * Explain how reporting tracks actual usage, is continuously available to the Ordering Activity, and provides meaningful metrics appropriate to the cloud computing services.
* Explain how the offering unit of measure (UOM)/unit of issue (UOI) allows Ordering Activities to realize the full benefit of “pay as you go”/consumption models.
* Explain how the offering allows Ordering Activities to realize the full benefit of “pay as you go”/consumption models.
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1. National Institute for Standards and Technology Special Publication 800-145 The NIST Definition of Cloud Computing (NIST SP 800-145) [↑](#footnote-ref-0)