



General Services Administration
Federal Supply Service
Authorized Federal Supply Schedule Price List

Multiple Award Schedule (MAS) Price List
General Purpose Commercial Information Technology
Equipment, Software, and Services

Special Item No. 54151S Information Technology Professional Services
Special Item No. 518210C Cloud Services

Contract Number: **47QSMD20R0001**

Period Covered by Contract:

4/13/2020 – 4/12/2025

DUNS: 012834276

Triad Communications, Inc.
P.O. Box 60492
Potomac, MD 20859
Telephone: (202) 332-3800
<http://www.com.com>

Contractor's Administration Source:
Philip Lombardo, Email: plombardo@triad-com.com

Business Size: **Small Business**

Customer Information

1a. TABLE OF AWARDED SPECIAL ITEM NUMBERS (SINs):

SIN 54151S: Information Technology Professional
SIN 518210C: Cloud Services

1b. LOWEST UNIT PRICE FOR THAT MODEL FOR EACH SPECIAL ITEM NUMBER:

1c. HOURLY RATES (Services Only)

	Approved Price List				
SIN 54151S IT Support Services	4/13/2020- 4/12/2021	4/13/2021- 4/12/2022	4/13/2022- 4/12/2023	4/13/2023- 4/12/2024	4/13/2024- 4/12/2025
Computer Programmer I	\$ 119.65	\$122.28	\$124.97	\$127.72	\$130.53
Computer Programmer II	\$ 143.58	\$146.74	\$149.96	\$153.26	\$156.63
IT Consultant I	\$ 105.29	\$107.61	\$109.97	\$112.39	\$114.87
IT Consultant II	\$ 119.65	\$122.28	\$124.97	\$127.72	\$130.53
IT Consultant III	\$ 143.58	\$146.74	\$149.96	\$153.26	\$156.63
Database Administrator I	\$ 119.65	\$122.28	\$124.97	\$127.72	\$130.53
Database Administrator II	\$ 143.58	\$146.74	\$149.96	\$153.26	\$156.63
Graphics Specialist	\$ 86.15	\$88.04	\$89.98	\$91.96	\$93.98
Project Manager I	\$ 119.65	\$122.28	\$124.97	\$127.72	\$130.53
Project Manager II	\$ 143.58	\$146.74	\$149.96	\$153.26	\$156.63
Program Manager	\$ 114.86	\$117.39	\$119.97	\$122.61	\$125.31
Scrum Master	\$ 86.15	\$88.04	\$89.98	\$91.96	\$93.98
Subject Matter Expert I	\$ 119.65	\$122.28	\$124.97	\$127.72	\$130.53
Subject Matter Expert II	\$ 143.58	\$146.74	\$149.96	\$153.26	\$156.63
Subject Matter Expert III	\$ 167.51	\$171.19	\$174.96	\$178.81	\$182.74
Solutions Architect	\$ 143.58	\$146.74	\$149.96	\$153.26	\$156.63
Systems Analyst	\$ 119.65	\$122.28	\$124.97	\$127.72	\$130.53
Network Administrator	\$ 143.58	\$146.74	\$149.96	\$153.26	\$156.63
Software Engineer I	\$ 143.58	\$146.74	\$149.96	\$153.26	\$156.63
Software Engineer II	\$ 167.51	\$171.19	\$174.96	\$178.81	\$182.74
Web Designer	\$ 119.65	\$122.28	\$124.97	\$127.72	\$130.53
Web Developer I	\$ 105.29	\$107.61	\$109.97	\$112.39	\$114.87
Web Developer II	\$ 119.65	\$122.28	\$124.97	\$127.72	\$130.53
Quality Assurance Specialist	\$ 119.65	\$122.28	\$124.97	\$127.72	\$130.53
Software Tester	\$ 119.65	\$122.28	\$124.97	\$127.72	\$130.53

	Approved Price List				
SIN 518210C Cloud Services	4/13/2020- 4/12/2021	4/13/2021- 4/12/2022	4/13/2022- 4/12/2023	4/13/2023- 4/12/2024	4/13/2023- 4/12/2024
Cloud Computing Specialist	\$ 114.86	\$117.39	\$119.97	\$122.61	\$125.31
Cloud Architect	\$ 119.65	\$122.28	\$124.97	\$127.72	\$130.53
Cloud Administrator	\$ 114.86	\$117.39	\$119.97	\$122.61	\$125.31
Cloud Security Specialist	\$ 129.22	\$132.06	\$134.97	\$137.94	\$140.97
Cloud Systems Engineer	\$ 119.65	\$122.28	\$124.97	\$127.72	\$130.53
Cloud Subject Matter Expert	\$ 181.86	\$185.86	\$189.95	\$194.13	\$198.40

2. MAXIMUM ORDER*: \$500,000

***If the “best value” selection places your order over this Maximum Order identified in this catalog/pricelist, you have an opportunity to obtain a better schedule contract price. Before placing your order, contact the aforementioned contractor for a better price. The contractor may (1) offer a new price for this requirement; (2) offer the lowest price available under this contract; or (3) decline the order. A delivery order that exceeds the maximum order may be placed under the Schedule contract in accordance with FAR 8.404**

3. MINIMUM ORDER: \$100.00

4. GEOGRAPHIC COVERAGE: 54151S – Worldwide; 518210C – Worldwide;

5. POINT(S) OF PRODUCTION: P.O. Box 60492 Potomac, MD 20859

6. DISCOUNT FROM LIST PRICES: Net GSA pricing is listed in the attached pricing table

7. QUANTITY DISCOUNT(S): None

8. PROMPT PAYMENT TERMS: Net 30 Days

9a. Government purchase cards are accepted at or below the micro-purchase threshold

9b. Government purchase cards are not accepted above the micro-purchase threshold

10. FOREIGN ITEMS: None

11a. TIME OF DELIVERY: To be negotiated w/the ordering agency

11b. EXPEDITED DELIVERY: To be negotiated w/the ordering agency

11c. OVERNIGHT AND 2-DAY DELIVERY: To be negotiated at the task order level

11d. URGENT REQUIREMENTS: Customers are encouraged to contact the contractor for the purpose of requesting accelerated delivery

12. FOB POINT: Destination; 48 contiguous states and Washington, DC, as well as Alaska, Hawaii, and Puerto Rico

**13a. ORDERING ADDRESS:
Triad Communications, Inc.
P.O. Box 60492
Potomac, MD 20859**

13b. ORDERING PROCEDURES: For supplies and services, the ordering procedures, information on Blanket Purchase Agreements (BPA's) are found in FAR 8.405-3

**14. PAYMENT ADDRESS:
Triad Communications, Inc.
P.O. Box 60492
Potomac, MD 20859**

15. WARRANTY PROVISION: N/A

16. EXPORT PACKING CHARGES: N/A

**17. TERMS AND CONDITIONS OF GOVERNMENT PURCHASE CARD ACCEPTANCE:
Accepted at and below the micro-purchase threshold**

18. TERMS AND CONDITIONS OF RENTAL, MAINTENANCE, AND REPAIR (if applicable). N/A
19. TERMS AND CONDITIONS OF INSTALLATION (IF APPLICABLE): N/A
20. TERMS AND CONDITIONS OF REPAIR PARTS INDICATING DATE OF PARTS PRICE LISTS AND ANY DISCOUNTS FROM LIST PRICES (IF AVAILABLE): N/A
- 20a. TERMS AND CONDITIONS FOR ANY OTHER SERVICES (IF APPLICABLE): N/A
21. LIST OF SERVICE AND DISTRIBUTION POINTS (IF APPLICABLE): N/A
22. LIST OF PARTICIPATING DEALERS (IF APPLICABLE): N/A
23. PREVENTIVE MAINTENANCE (IF APPLICABLE): N/A
- 24a. SPECIAL ATTRIBUTES SUCH AS ENVIRONMENTAL ATTRIBUTES (e.g. recycled content, energy efficiency, and/or reduced pollutants): N/A
- 24b. Section 508 Compliance for EIT: N/A
25. Data Universal Numbering Systems (DUNS) number: 012834276
26. NOTIFICATION REGARDING REGISTRATION IN SYSTEM FOR AWARD MANAGEMENT (SAM) DATABASE: Active, CAGE Code 7RGV8

**TERMS AND CONDITIONS APPLICABLE TO INFORMATION TECHNOLOGY (IT)
PROFESSIONAL SERVICES (SPECIAL ITEM NUMBER 54151S)**

****The phrase, "Information Technology (IT) Professional Services/Identity Access Management (IAM) Professional Services" in the following paragraphs may need to be revised in order to be consistent with the Offeror's proposal; e.g., if only IT Professional Services are offered, all references to IAM Services should be deleted.****

******NOTE: All non-professional labor categories must be incidental to, and used solely to support professional services, and cannot be purchased separately. Further, non-professional labor categories shall be offered under SIN 132 100 only.**

1. SCOPE

- a. The prices, terms and conditions stated under Special Item Number 132-51 Information Technology Professional Services apply exclusively to IT/IAM Professional Services within the scope of this Information Technology Schedule.
- b. The Contractor shall provide services at the Contractor's facility and/or at the ordering activity location, as agreed to by the Contractor and the ordering activity.

2. PERFORMANCE INCENTIVES I-FSS-60 Performance Incentives (April 2000)

- a. Performance incentives may be agreed upon between the Contractor and the ordering activity on individual fixed price orders or Blanket Purchase Agreements under this contract.
- b. The ordering activity must establish a maximum performance incentive price for these services and/or total solutions on individual orders or Blanket Purchase Agreements.
- c. Incentives should be designed to relate results achieved by the contractor to specified targets. To the maximum extent practicable, ordering activities shall consider establishing incentives where performance is critical to the ordering activity's mission and incentives are likely to motivate the

contractor. Incentives shall be based on objectively measurable tasks.

3. ORDER

- a. Agencies may use written orders, EDI orders, blanket purchase agreements, individual purchase orders, or task orders for ordering services under this contract. Blanket Purchase

Agreements shall not extend beyond the end of the contract period; all services and delivery shall be made and the contract terms and conditions shall continue in effect until the completion of the order. Orders for tasks which extend beyond the fiscal year for which funds are available shall include FAR 52.232-19 (Deviation – May 2003) Availability of Funds for the Next Fiscal Year. The purchase order shall specify the availability of funds and the period for which funds are available.

- b. All task orders are subject to the terms and conditions of the contract. In the event of conflict between a task order and the contract, the contract will take precedence.

4. PERFORMANCE OF SERVICES

- a. The Contractor shall commence performance of services on the date agreed to by the Contractor and the ordering activity.
- b. The Contractor agrees to render services only during normal working hours, unless otherwise agreed to by the Contractor and the ordering activity.
- c. The ordering activity should include the criteria for satisfactory completion for each task in the Statement of Work or Delivery Order. Services shall be completed in a good and workmanlike manner.
- d. Any Contractor travel required in the performance of IT/IAM Services must comply with the Federal Travel Regulation or Joint Travel Regulations, as applicable, in effect on the date(s) the travel is performed. Established Federal Government per diem rates will apply to all Contractor travel. Contractors cannot use GSA city pair contracts.

5. STOP-WORK ORDER (FAR 52.242-15) (AUG 1989)

- a. The Contracting Officer may, at any time, by written order to the Contractor, require the Contractor to stop all, or any part, of the work called for by this contract for a period of 90 days after the order is delivered to the Contractor, and for any further period to which the parties may agree. The order shall be specifically identified as a stop-work order issued under this clause. Upon receipt of the order, the Contractor shall immediately comply with its terms and take all reasonable steps to minimize the incurrence of costs allocable to the work covered by the order during the period of work stoppage. Within a period of 90 days after a stop-work is delivered to the Contractor, or within any extension of that period to which the parties shall have agreed, the Contracting Officer shall either-
 - (1) Cancel the stop-work order; or
 - (2) Terminate the work covered by the order as provided in the Default, or the Termination for Convenience of the Government, clause of this contract.
- b. If a stop-work order issued under this clause is canceled or the period of the order or any extension thereof expires, the Contractor shall resume work. The Contracting Officer shall make an equitable adjustment in the delivery schedule or contract price, or both, and the contract shall be modified, in writing, accordingly, if-
 - (1) The stop-work order results in an increase in the time required for, or in the Contractor's cost properly allocable to, the performance of any part of this contract; and
 - (2) The Contractor asserts its right to the adjustment within 30 days after the end of the period of work stoppage; provided, that, if the Contracting Officer decides the facts justify the action, the Contracting Officer may receive and act upon the claim submitted at any time before final payment under this contract.

- c. If a stop-work order is not canceled and the work covered by the order is terminated for the convenience of the Government, the Contracting Officer shall allow reasonable costs resulting from the stop-work order in arriving at the termination settlement.
- d. If a stop-work order is not canceled and the work covered by the order is terminated for default, the Contracting Officer shall allow, by equitable adjustment or otherwise, reasonable costs resulting from the stop-work order.

6. INSPECTION OF SERVICES

In accordance with 552.212-4 CONTRACT TERMS AND CONDITIONS–COMMERCIAL ITEMS (JAN 2017) (DEVIATION – FEB 2007)(DEVIATION - FEB 2018) for Firm-Fixed Price orders; or GSAR 552.212-4 CONTRACT TERMS AND CONDITIONS-COMMERCIAL ITEMS (JAN 2017) (DEVIATION - FEB 2018) (ALTERNATE I - JAN 2017) (DEVIATION - FEB 2007) for Time-and-Materials and Labor-Hour Contracts orders placed under this contract.

7. RESPONSIBILITIES OF THE CONTRACTOR

The Contractor shall comply with all laws, ordinances, and regulations (Federal, State, City, or otherwise) covering work of this character. If the end product of a task order is software, then FAR 52.227-14 (Dec 2007) Rights in Data – General, may apply.

8. RESPONSIBILITIES OF THE ORDERING ACTIVITY

Subject to security regulations, the ordering activity shall permit Contractor access to all facilities necessary to perform the requisite IT/IAM Professional Services.

9. INDEPENDENT CONTRACTOR

All IT/IAM Professional Services performed by the Contractor under the terms of this contract shall be as an independent Contractor, and not as an agent or employee of the ordering activity.

10. ORGANIZATIONAL CONFLICTS OF INTEREST

- a. Definitions.

“Contractor” means the person, firm, unincorporated association, joint venture, partnership, or corporation that is a party to this contract.

“Contractor and its affiliates” and “Contractor or its affiliates” refers to the Contractor, its chief executives, directors, officers, subsidiaries, affiliates, subcontractors at any tier, and consultants and any joint venture involving the Contractor, any entity into or with which the Contractor subsequently merges or affiliates, or any other successor or assignee of the Contractor.

An “Organizational conflict of interest” exists when the nature of the work to be

performed under a proposed ordering activity contract, without some restriction on ordering activities by the Contractor and its affiliates, may either (i) result in an unfair competitive advantage to the Contractor or its affiliates or (ii) impair the Contractor’s or its affiliates’ objectivity in performing contract work.

- b. To avoid an organizational or financial conflict of interest and to avoid prejudicing the best interests of the ordering activity, ordering activities may place restrictions on the Contractors, its affiliates, chief executives, directors, subsidiaries and subcontractors at any tier when placing orders against schedule contracts. Such restrictions shall be consistent with FAR 9.505 and shall be designed to avoid, neutralize, or mitigate organizational conflicts of interest that might otherwise exist in situations related to individual orders placed against the schedule contract. Examples of situations, which may require restrictions, are provided at FAR 9.508.

11. INVOICES

The Contractor, upon completion of the work ordered, shall submit invoices for IT/IAM Professional

services. Progress payments may be authorized by the ordering activity on individual orders if appropriate. Progress payments shall be based upon completion of defined milestones or interim products. Invoices shall be submitted monthly for recurring services performed during the preceding month.

12. PAYMENTS

For firm-fixed price orders the ordering activity shall pay the Contractor, upon submission of proper invoices or vouchers, the prices stipulated in this contract for service rendered and accepted. Progress payments shall be made only when authorized by the order. For time-and- materials orders, the Payments under Time-and-Materials and Labor-Hour Contracts at FAR 52.212-4 (MAR 2009) (ALTERNATE I – OCT 2008) (DEVIATION I – FEB 2007) applies to time-and-materials orders placed under this contract. For labor-hour orders, the Payment under Time-and-Materials and Labor-Hour Contracts at FAR 52.212-4 (MAR 2009) (ALTERNATE I – OCT 2008) (DEVIATION I – FEB 2007) applies to labor-hour orders placed under this contract. 52.216-31(Feb 2007) Time-and Materials/Labor-Hour Proposal Requirements— Commercial Item Acquisition. As prescribed in 16.601(e)(3), insert the following provision:

- a. The Government contemplates award of a Time-and-Materials or Labor-Hour type of contract resulting from this solicitation.
- b. The offeror must specify fixed hourly rates in its offer that include wages, overhead, general and administrative expenses, and profit. The offeror must specify whether the fixed hourly rate for each labor category applies to labor performed by—
 - (1) The offeror;
 - (2) Subcontractors; and/or
 - (3) Divisions, subsidiaries, or affiliates of the offeror under a common control.

13. RESUMES

Resumes shall be provided to the GSA Contracting Officer or the user ordering activity upon request.

14. INCIDENTAL SUPPORT COSTS

Incidental support costs are available outside the scope of this contract. The costs will be negotiated separately with the ordering activity in accordance with the guidelines set forth in the FAR.

15. APPROVAL OF SUBCONTRACTS

The ordering activity may require that the Contractor receive, from the ordering activity's Contracting Officer, written consent before placing any subcontract for furnishing any of the work called for in a task order.

16. DESCRIPTION OF IT/IAM PROFESSIONAL SERVICES AND PRICING

- a. The Contractor shall provide a description of each type of IT/IAM Service offered under Special Item Numbers 132-51 IT/IAM Professional Services should be presented in the same manner as the Contractor sells to its commercial and other ordering activity customers. If the Contractor is proposing hourly rates, a description of all corresponding commercial job titles (labor categories) for those individuals who will perform the service should be provided.
- b. Pricing for all IT/IAM Professional Services shall be in accordance with the Contractor's customary commercial practices; e.g., hourly rates, monthly rates, term rates, and/or fixed prices, minimum general experience and minimum education.
- c. The following is an example of the manner in which the description of a commercial job title should be presented:

EXAMPLE: Commercial Job Title: System Engineer

Minimum/General Experience: Three (3) years of technical experience which applies to systems

analysis and design techniques for complex computer systems. Requires competence in all phases of systems analysis techniques, concepts and methods; also requires knowledge of available hardware, system software, input/output devices, structure and management practices.
Functional Responsibility: Guides users in formulating requirements, advises alternative approaches, conducts feasibility studies.
Minimum Education: Bachelor's Degree in Computer Science

SIN 54151S IT PROFESSIONAL SERVICE LABOR CATEGORY DESCRIPTION

Commercial Job Title: Computer Programmer I

Minimum/General Experience: 2

Functional Responsibility: The Programmer 2 is responsible for activities such as program design, coding, testing, debugging or documentation. This individual has technical knowledge and responsibility of all phases of applications systems analysis and programming. Understands the business or function for which application is designed. The Programmer may: 1) Write programs according to specifications, which may be provided by Engineers, technical architects, or other computer scientists. And 2) Update, repair, modify and expand existing computer programs.

Minimum Education: Bachelors

Commercial Job Title: Computer Programmer II

Minimum/General Experience: 5

Functional Responsibility: The Programmer 3 is responsible for activities such as program design, coding, testing, debugging or documentation. This individual has technical knowledge and responsibility of all phases of applications systems analysis and programming. Understands the business or function for which application is designed. The Programmer may: 1) Write programs according to specifications, which may be provided by Engineers, technical architects, or other computer scientists. 2) Update, repair, modify and expand existing computer programs.

Minimum Education: Bachelors

Commercial Job Title: IT Consultant I

Minimum/General Experience: 2

Functional Responsibility: Works with user groups to solve business problems with available technology including hardware, software, databases, and peripherals. Requires high level of diverse technical experience related to studying and analyzing systems needs, systems development, systems process analysis, design, and re-engineering. Has skills and experience related to business management, systems engineering, operations research, and management engineering. Typically requires specialization in particular software or business application utilized in an end user environment. Keeps abreast of technological developments and applications.

Minimum Education: Bachelors

Commercial Job Title: IT Consultant II

Minimum/General Experience: 5

Functional Responsibility: Works with user groups to solve business problems with available technology including hardware, software, databases, and peripherals. Requires high level of diverse technical experience related to studying and analyzing systems needs, systems development, systems process analysis, design, and re-engineering. Has skills and experience related to business management, systems engineering, operations research, and management engineering. Typically requires specialization in particular software or business application utilized in an end user environment. Keeps abreast of technological developments and applications.

Minimum Education: Bachelors

Commercial Job Title: IT Consultant III

Minimum/General Experience: 7

Functional Responsibility: Top-level IT technical expert supporting unlimited end user groups. Works with user groups to solve business problems with available technology including hardware, software, databases, and peripherals. Requires high level of diverse technical experience related to studying and analyzing system's needs, systems development, systems process analysis, design, and re-engineering. Has skills and experience related to business management, systems engineering, operations research, and management engineering. Typically requires specialization in particular software or business application utilized in an end user environment. Keeps abreast of technological developments and applications.

Commercial Job Title: Database Administrator I

Minimum/General Experience: 2

Functional Responsibility: Database Administrator I administers organization's databases, using database management system to organize and store data. The Database Administrator 1 ascertains user requirements, creates computer databases, and tests and coordinates changes. This individual interacts with development and end-user personnel to determine application data access requirements, transaction rates, volume analysis, and other pertinent data required to develop and maintain integrated databases. Minimum Education: Bachelor

Commercial Job Title: Database Administrator II

Minimum/General Experience: 5

Functional Responsibility: Database Administrator II administers organization's databases, using database management system to organize and store data. The Database Administrator 2 ascertains user requirements, creates computer databases, and tests and coordinates changes. This individual interacts with development and end-user personnel to determine application data access requirements, transaction rates, volume analysis, and other pertinent data required to develop and maintain integrated databases.

Minimum Education: Bachelor

Commercial Job Title: Graphic Specialist

Minimum/General Experience: 0

Functional Responsibility: Designs and develops graphic illustrations from sketches and other types of artwork using COTS. Creates graphic displays as well as in Internet compatible formats. Provides scanning, sizing, and enhancement support. Assists in integrating graphics with text in desktop publishing media.

Minimum Education: Bachelor

Commercial Job Title: Project Control Analyst

Minimum/General Experience: 1

Functional Responsibility: Responsible for input and verification of data; reviews source documents for accuracy of input data; reviews, follows up and resolves errors during processing cycle; may be responsible for integrity of certain database information; investigates questionable data and takes corrective action when necessary; maintains files; generates reports and may analyze specific database information. Support project-related activities such as tracking the advancement of active projects, maintaining project schedules, analyzing cost data and project cost analysis. Responsible for development and maintenance of a database for producing labor to cost reports, planning efforts for resource loading, materials forecasting, and tracking metrics for group performance.

Minimum Education: Bachelor

Commercial Job Title: Project Manager I

Minimum/General Experience: 2

Functional Responsibility: Responsible for all contract activities as a regular part of this role, performs it independently and normally without review by a supervisor or senior employee. Sets policies and procedures, technical standards and methods, and priorities of IT task. Coordinates the management of all work performed on tasks under the contract. Coordinates the efforts of subcontractors, team members, and vendors. Acts as the central point of contact with the Contracting Officer (CO), the Contracting Officer's Representative (COR), and other client officials. Exercises full authority to act for the company in the performance of the required work and services under all task orders. Works independently, or under the general direction of senior level company management, on all phases of performance including contract management, project/task order management, coordination of resource needs, coordination with corporate resources and management. Reports to senior company management on contract and task performance and issues. Has direct accountability for the technical correctness, timeliness and quality of deliverables, and the implementation and measurement of corporate and client quality standards and methodologies. Has a broad and deep knowledge of the IT industry, business administration, and human resource management and has excellent oral and written communications skills.

Minimum Education: Bachelor

Commercial Job Title: Project Manager II

Minimum/General Experience: 5

Functional Responsibility: Responsible for all contract activities as a regular part of this role, performs it independently and normally without review by a supervisor or senior employee. Sets policies and procedures, technical standards and methods, and priorities of IT task. Coordinates the management of all work performed on

tasks under the contract. Coordinates the efforts of subcontractors, team members, and vendors. Acts as the central point of contact with the Contracting Officer (CO), the Contracting Officer's Representative (COR), and other client officials. Exercises full authority to act for the company in the performance of the required work and services under all task orders. Works independently, or under the general direction of senior level company management, on all phases of performance including contract management, project/task order management, coordination of resource needs, coordination with corporate resources and management. Reports to senior company management on contract and task performance and issues. Has direct accountability for the technical correctness, timeliness and quality of deliverables, and the implementation and measurement of corporate and client quality standards and methodologies. Has a broad and deep knowledge of the IT industry, business administration, and human resource management and has excellent oral and written communications skills.

Minimum Education: Bachelor

Commercial Job Title: Program Manager

Minimum/General Experience: 2

Functional Responsibility: Responsible for all contract activities as a regular part of this role, performs it independently and normally without review by a supervisor or senior employee. Sets policies and procedures, technical standards and methods, and priorities of IT task. Coordinates the management of all work performed on tasks under the contract. Coordinates the efforts of subcontractors, team members, and vendors. Acts as the central point of contact with the Contracting Officer (CO), the Contracting Officer's Representative (COR), and other client officials. Exercises full authority to act for the company in the performance of the required work and services under all task orders. Works independently, or under the general direction of senior level company management, on all phases of performance including contract management, project/task order management, coordination of resource needs, coordination with corporate resources and management. Reports to senior company management on contract and task performance and issues. Has direct accountability for the technical correctness, timeliness and quality of deliverables, and the implementation and measurement of corporate and client quality standards and methodologies. Has a broad and deep knowledge of the IT industry, business administration, and human resource management and has excellent oral and written communications skills.

Minimum Education: Bachelor

Commercial Job Title: Scrum Master

Minimum/General Experience: 2

Functional Responsibility: The Scrum Master may facilitate or guide a software development product owner, team, and organization on how to use Agile/Scrum concepts, values, practices, and principles focusing on improving team effectiveness. The Scrum Master leads discussions and decision making, and assists in mediation of conflict resolution.

Minimum Education: Bachelor

Commercial Job Title: Subject Matter Expert I

Minimum/General Experience: 2

Functional Responsibility: The Subject Matter Expert I has industry experience in the relevant subject matter. This individual will use information technology expertise and/or industry focus expertise in fulfilling the interpreted customer specification. The Subject Matter Expert 1 is highly experienced in the industry with regard to information technology. The Subject Matter Expert I provides thought leadership related to current and future customer plans with regard to the stated information technology.

Minimum Education: Bachelor

Commercial Job Title: Subject Matter Expert II

Minimum/General Experience: 5

Functional Responsibility: The Subject Matter Expert II has industry experience in the relevant subject matter. This individual will use information technology expertise and/or industry focus expertise in fulfilling the interpreted customer specification. The Subject Matter Expert 2 is an highly experienced in the industry with regard to information technology. The Subject Matter Expert 2 provides thought leadership related to current and future customer plans with regard to the stated information technology.

Minimum Education: Bachelor

Commercial Job Title: Subject Matter Expert III

Minimum/General Experience: 7

Functional Responsibility: The Subject Matter Expert III has industry experience in the relevant subject matter. This individual will use information technology expertise and/or industry focus expertise in fulfilling the interpreted

customer specification. The Subject Matter Expert 3 is highly experienced in the industry with regard to the stated information technology. The Subject Matter Expert 3 provides thought leadership related to current and future customer plans with regard to the stated information technology.
Minimum Education: Bachelor

Commercial Job Title: Solutions Architect

Minimum/General Experience: 2

Functional Responsibility: Responsible for leading the full systems life cycle with solution design, development, implementation, and product support using scrum and other agile methodologies. Designs and develops IT solutions that most efficiently and effectively meet defined business needs and requirements, while ensuring alignment to an organization's Enterprise Architecture and IT strategic goals. Supports creation of new agile processes and recommends changes and improvements to current processes and supporting tools.

Minimum Education: Bachelor

Commercial Job Title: Systems Analyst

Minimum/General Experience: 2

Functional Responsibility: Performs system-wide analysis, with respect to computer functions allocations, software development, hardware development and reliability, maintainability and availability. Directs and evaluates the work of other lower level analysts.

Minimum Education: Bachelor's Degree

Commercial Job Title: Network Administrator

Minimum/General Experience: 4

Functional Responsibility: Acquires, installs, and maintains local area IT networks independently and normally without review by supervisors or senior employee. Studies vendor products to determine those which best meet user needs and presents information to management for acquisition approval. Purchases and installs new products. Manages network performance and troubleshoots problems. Ensures that security procedures are implemented and enforced. Establishes and implements network policies, procedures and standards. Maintains distributed processing databases on the local area network. Trains users on network operation and use.

Minimum Education: Bachelor's Degree

Commercial Job Title: Software Engineer I

Minimum/General Experience: 2

Functional Responsibility: Provides support in designs, develops, and provides customization of various applications to meet a series of pre-defined requirements. Requirements will be met through the use of various programming languages and possibly machine and assembly languages.

Minimum Education: Bachelor's Degree

Commercial Job Title: Software Engineer II

Minimum/General Experience: 5

Functional Responsibility: Works independently on designs, develops, and provides customization of various applications to meet a series of pre-defined requirements. Requirements will be met through the use of various programming languages and possibly machine and assembly languages.

Minimum Education: Bachelor

Commercial Job Title: Web Designer

Minimum/General Experience: 0

Functional Responsibility: Write code to generate web pages, access databases and business logic servers. Work with designers and content producers. Test and document software for websites. Write, modify, and debug software for websites. Develop technical architecture of internet websites including scripting and user interface design. Refresh internet website content to ensure accuracy and timeliness of information and images. Develop modifications or enhancements to existing internet web programs. Collaborate with back end developers and other team members. Ensure that the layout of content is accessible and logical, and recommend improvements.

Minimum Education: Bachelor's Degree

Commercial Job Title: Web Developer I

Minimum/General Experience: 2

Functional Responsibility: Write code to generate web pages, access databases and business logic servers. Work with designers and content producers. Test and document software for websites. Write, modify, and debug software for websites. Develop technical architecture of internet websites including scripting and user interface design.

Refresh internet website content to ensure accuracy and timeliness of information and images. Develop modifications or enhancements to existing internet web programs. Collaborate with back end developers and other team members. Ensure that the layout of content is accessible and logical, and recommend improvements. Write code to generate web pages, access databases and business logic servers. Work with designers and content producers. Test and document software for websites. Write, modify, and debug software for websites. Develop technical architecture of internet websites including scripting and user interface design. Refresh internet website content to ensure accuracy and timeliness of information and images. Develop modifications or enhancements to existing internet web programs. Collaborate with back end developers and other team members. Ensure that the layout of content is accessible and logical, and recommend improvements.

Minimum Education: Bachelor's Degree

Commercial Job Title: Web Developer II

Minimum/General Experience: 2

Functional Responsibility: Develop technical architecture of internet websites including scripting and user interface design. Refresh internet website content to ensure accuracy and timeliness of information and images. Develop modifications or enhancements to existing internet web programs. Collaborate with back end developers and other team members. Ensure that the layout of content is accessible and logical, and recommend improvements. Write code to generate web pages, access databases and business logic servers. Work with designers and content producers. Test and document software for websites. Write, modify, and debug software for websites. Develop technical architecture of internet websites including scripting and user interface design. Refresh internet website content to ensure accuracy and timeliness of information and images. Develop modifications or enhancements to existing internet web programs. Collaborate with back end developers and other team members. Ensure that the layout of content is accessible and logical, and recommend improvements. Write code to generate web pages, access databases and business logic servers. Work with designers and content producers. Test and document software for websites. Write, modify, and debug software for websites. Develop technical architecture of internet websites including scripting and user interface design. Refresh internet website content to ensure accuracy and timeliness of information and images. Develop modifications or enhancements to existing internet web programs. Collaborate with back end developers and other team members. Ensure that the layout of content is accessible and logical, and recommend improvements.

Minimum Education: Bachelor

Commercial Job Title: Quality Assurance Specialist

Minimum/General Experience: 0

Functional Responsibility: Assures the level of quality throughout the software development life cycle customer and agency standards. Establishes and monitors a process for evaluating software and associated documentation. Assists in developing Quality Assurance Plans. Conducts formal and informal reviews at predetermined stages throughout the development life cycle. Participates in software reviews and testing. Initiates corrective action for procedural or process deficiencies. Assures the level of quality throughout the software development life cycle customer and agency standards. Establishes and monitors a process for evaluating software and associated documentation. Assists in developing Quality Assurance Plans. Conducts formal and informal reviews at predetermined stages throughout the development life cycle. Participates in software reviews and testing. Initiates corrective action for procedural or process deficiencies.

Minimum Education: Bachelor

Commercial Job Title: Software Tester

Minimum/General Experience: 0

Functional Responsibility: Lead testing and Evaluating functionality of systems and applications. Design, Execute and Maintain Test Plans. Record and document test results, anomalies, issues, and compare to expected results. Manage Testing suite that records results and generate reports. Establish best practices in Quality control. Participate in Test planning, demonstrations and designing. Use Database tools such as SQL for accuracy. Knowledge of 508 Compliance Testing. Knowledge of Performance testing.

Minimum Education: Bachelors

27. MANAGEMENT (SAM) DATABASE: Active, CAGE Code 7T1Y2

TERMS AND CONDITIONS APPLICABLE TO PURCHASE OF CLOUD COMPUTING PRODUCTS AND CLOUD RELATED IT PROFESSIONAL SERVICES (SPECIAL ITEM NUMBER 518210C)

****NOTE: This SIN presents a solution for Contractors to provide cloud computing services and cloud-related IT professional services that comply with NIST definitions and principles within the scope of today's technology and standards with a secondary goal of accommodating ongoing advances in cloud computing. SIN 518210C Cloud Computing Services and Cloud-Related IT Professional Services is designed to cover core Cloud Services including Infrastructure as a Service, Platform as a Service, and Software as a Service, as well as the Cloud-related IT Professional Services required to assess, prepare, refactor, migrate, DevOps, integrate or govern a Cloud implementation.

In accordance with section 889 of the National Defense Authorization Act for Fiscal Year 2019 (Pub. L. 115-232, August 13, 2018), an executive agency will be prohibited one year after enactment of the Act from procuring, obtaining, extending or renewing a contract to procure or obtain any equipment, system or service that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system; and two years after enactment of the Act from entering into, renewing or extending a contract with an entity that uses covered telecommunications equipment or service in that entity's equipment, system or service, as a substantial or essential component of any system, or as critical technology as part of any system. Section 889 defines "covered telecommunications equipment or services" as any of the following:

(A) Telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities).

(B) For the purpose of public safety, security of government facilities, physical security surveillance of critical infrastructure, and other national security purposes, video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities).

(C) Telecommunications or video surveillance services provided by such entities or using such equipment.

(D) Telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of the National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country (i.e. the People's Republic of China). (Pub. L. 115-232, section 889(f)(3), italicized parenthetical added).

1. SCOPE

The prices, terms and conditions stated under Special Item Number (SIN) 518210C Cloud Computing Services (i.e. IaaS, etc.) and Cloud-Related Professional Services apply exclusively to Cloud Computing Services (i.e. IaaS, etc.) and Cloud-Related Professional Services within the scope of this Information Technology Schedule.

This SIN provides ordering activities with access to Cloud (i.e. SaaS, etc.) technical services that run in cloud environments and meet the NIST Definition of Cloud Computing Essential Characteristics. Cloud Services [(i.e. SaaS, etc.)] relating to or impinging on cloud that do not meet all NIST essential characteristics should be listed in other SINs. (For example: Software subscription services or Software as a Service offerings that do not meet the essential "measured service" requirement may meet the definition of "Term Licenses" under SIN 132-32. See the Measured Service requirement in Table 2, below.)

The scope of this SIN is limited to cloud capabilities provided entirely as a "pay as you go" service and cloud-related IT professional services. Hardware, software and other artifacts acquired to supporting the physical construction of a private or other cloud are out of scope for this SIN. Currently, an Ordering Activity can procure the hardware and software needed to build private on premise cloud functionality, through combining different services on other IT Schedule 70 SINs (e.g. 132-8, 132-32, 132-33, 132-34, 132-52, 132-51).

Sub-categories in scope for this SIN are the three NIST Service Models: Software as a Service (SaaS), Platform as a Service (PaaS), and Infrastructure as a Service (IaaS). Offerors may optionally select a single sub-category that best fits a proposed cloud service offering. Only one sub-category may be selected per each proposed cloud service offering. Offerors may elect to submit multiple cloud service offerings, each with its own single sub-category. The selection of one of three sub-categories does not prevent Offerors from competing for orders under the other two sub-categories.

See service model guidance for advice on sub-category selection.

Sub-category selection within this SIN is optional for any individual cloud service offering, and new cloud computing service (i.e. IaaS, etc.) technologies that do not align with the aforementioned three sub-categories may be included without a sub-category selection so long as they comply with the essential characteristics of cloud computing as outlined by NIST.

See Table 1 for a representation of the scope and sub-categories.

Table 1: Cloud Computing Services (i.e. IaaS, etc.)

SIN Description	Sub-Categories ¹
<ul style="list-style-type: none"> • Commercially available cloud computing services • Meets the National Institute for Standards and Technology (NIST) definition of Cloud Computing essential characteristics • Open to all deployment models (private, public, community or hybrid), vendors specify deployment models 	<ol style="list-style-type: none"> 1. Software as a Service (SaaS): Consumer uses provider's applications on cloud infrastructure. Does not manage/control platform or infrastructure. Limited application level configuration may be available. 2. Platform as a Service (PaaS): Consumer deploys applications onto cloud platform service using provider-supplied tools. Has control over deployed applications and some limited platform configuration but does not manage the platform or infrastructure. 3. Infrastructure as a Service (IaaS): Consumer provisions computing resources. Has control over OS, storage, platform, deployed applications and some limited infrastructure configuration, but does not manage the infrastructure.

2. DESCRIPTION OF CLOUD COMPUTING SERVICES (i.e. IaaS, etc.) AND PRICING

****NOTE TO CONTRACTORS: The information provided below is designed to assist Contractors in qualifying cloud computing services for this SIN and providing complete descriptions and pricing information. This language should NOT be printed as part of the Information Technology Schedule Pricelist; instead, Contractors should respond to each service requirement as it relates to each cloud computing service offered under the contract. There is guidance provided in subsequent sections of the Terms and Conditions to assist in determining how to meet these requirements. This section delineates requirements for submitting a proposal for the Cloud Services (i.e. IaaS, etc.) SIN, as well as requirements that apply to Task Orders****

a. Service Description Requirements for Listing Contractors

The description requirements below are in addition to the overall Schedule 70 evaluation criteria described in SCP-FSS-001-N Instructions Applicable to New Offerors (Alternate I – MAR 2016) or SCP-FSS-001-S Instructions Applicable to Successful FSS Program Contractors, as applicable, SCP-FSS-004 and other relevant publications.

Refer to overall Schedule 70 requirements for timelines related to description and other schedule updates, including but not limited to clauses 552.238-81 – section E and clause I-FSS-600.

Table 2 summarizes the additional Contractor-provided description requirements for services proposed under the Cloud Computing Services (i.e. IaaS, etc.). All mandatory description requirements must be complete, and adequate according to evaluation criteria.

In addition there is one “Optional” reporting descriptions which exists to provide convenient service selection by relevant criteria. Where provided, optional description requirements must be complete and adequate according to evaluation criteria:

- (1) The NIST Service Model provides sub-categories for the Cloud SIN and is strongly encouraged, but not required. The Service Model based sub-categories provide this SIN with a structure to assist ordering activities in locating and comparing services of interest. Contractors may optionally select the single service model most closely corresponding to the specific service offering.
- (2) If a sub-category is selected it will be evaluated with respect to the NIST Service Model definitions and guidelines in “Guidance for Contractors”.

Table 2: Cloud Service Description Requirements

#	Description Requirement	Reporting Type	Instructions
1	Provide a brief written description of how the proposed cloud computing services (i.e. IaaS, etc.) satisfies each individual essential NIST Characteristic	Mandatory	<p>The cloud service must be capable of satisfying each of the five NIST essential Characteristics as outlined in NIST Special Publication 800-145. See 'GUIDANCE FOR CONTRACTORS: NIST Essential Characteristics' below in this document for detailed overall direction, as well as guidance on inheriting essential characteristics. The NIST "Measured Service" characteristic requires a minimal "pay as you go" unit of measurement appropriate for the service. In the case of SaaS, the appropriate maximum measured increment of service shall be no more than 30 days per user, or some other equivalent discrete measurement that provides the government with the advantage of frequent (approximately every 30 days) "pay as you go" metering cycles. SaaS products, where consumption is only measured on an annual basis, may better fit under "Term Software License" SIN 132-32. Likewise, offers of any combinations of IaaS, PaaS or any other cloud product services in a bundle or other fashion that do not meet the frequency requirements of approximately 30-day measurement and billing cycles, will not be accepted as complying with the NIST Measured Service characteristic.</p>
2	Select NIST deployment models for the cloud computing service proposed.	Mandatory	<p>Contractors must select at least one NIST deployment model as outlined in NIST Special Publication 800-145 describing how the proposed cloud computing service is deployed. Select multiple deployment models if the service is offered in more than one deployment model. See 'GUIDANCE FOR CONTRACTORS: NIST Deployment Model' below in this document for detailed direction on how to best categorize a service for the NIST deployment models.</p>
3	Optionally select the most appropriate NIST service model that will be the designated sub-category, or may select no sub-category.	Optional	<p>Contractor may select a single NIST Service model to sub-categorize the service as outlined in NIST Special Publication 800-145. Sub-category selection is optional but recommended. See 'GUIDANCE FOR CONTRACTORS: NIST Service Model' below in this document for detailed direction on how to best categorize a service for the NIST IaaS, PaaS, and SaaS service models.</p>

a. Pricing of Cloud Computing Services

All current pricing requirements for Schedule 70, including provision SCP-FSS-001-N (Section III Price Proposal), SCP-FSS-001-S, SCP-FSS-004 (Section III Price Proposal), and clause I-FSS-600 Contract Price Lists, apply. At the current time there is no provision for reducing or eliminating standard price list posting requirements to accommodate rapid cloud price fluctuations.

In addition to standard pricing requirements, all pricing models must have the core capability to meet the NIST Essential Cloud Characteristics, particularly with respect to on-demand self-service, while allowing alternate variations at the task order level at agency discretion, pursuant to the guidance on NIST Essential Characteristics.

3. RESPONSIBILITIES OF THE CONTRACTOR

The Contractor shall comply with all laws, ordinances, and regulations (Federal, State, City, or otherwise) covering work of this character.

a. Acceptance Testing

Any required Acceptance Test Plans and Procedures shall be negotiated by the Ordering Activity at task order level. The Contractor shall perform acceptance testing of the systems for Ordering Activity approval in accordance with the approved test procedures.

b. Training

If training is provided commercially the Contractor shall provide normal commercial installation, operation, maintenance, and engineering interface training on the system. Contractor is responsible for indicating if there are separate training charges.

c. Information Assurance/Security Requirements

The contractor shall meet information assurance/security requirements in accordance with the Ordering Activity requirements at the Task Order level.

d. Related Professional Services

The Contractor is responsible for working with the Ordering Activity to identify related professional services and any other services available on other SINs that may be associated with deploying a complete cloud service (i.e. IaaS, etc.) solution. Any additional substantial and ongoing IT professional services related to the offering such as assessing, preparing, refactoring, migrating, DevOps, developing new cloud based applications and managing/governing a cloud implementation may be offered per the guidelines below.

e. Performance of Cloud Computing Services (i.e. IaaS, etc.)

The Contractor shall respond to Ordering Activity requirements at the Task Order level with proposed capabilities to Ordering Activity performance specifications or indicate that only standard specifications are offered. In all cases the Contractor shall clearly indicate standard service levels, performance and scale capabilities.

The Contractor shall provide appropriate cloud computing services (i.e. IaaS, etc.) on the date and to the extent and scope agreed to by the Contractor and the Ordering Activity.

f. Reporting

The Contractor shall respond to Ordering Activity requirements and specify general reporting capabilities available for the Ordering Activity to verify performance, cost and availability.

In accordance with commercial practices, the Contractor may furnish the Ordering Activity/user with a monthly summary Ordering Activity report.

4. RESPONSIBILITIES OF THE ORDERING ACTIVITY

The Ordering Activity is responsible for indicating the cloud computing services requirements unique to the Ordering Activity. Additional requirements should not contradict existing SIN or IT Schedule 70 Terms and Conditions. Ordering Activities should include (as applicable) Terms & Conditions to address Pricing, Security, Data Ownership, Geographic Restrictions, Privacy, SLAs, etc.

Cloud services typically operate under a shared responsibility model, with some responsibilities assigned to the Cloud Service Provider (CSP), some assigned to the Ordering Activity, and others shared between the two. The distribution of responsibilities will vary between providers and across service models. Ordering activities should engage with CSPs to fully understand and evaluate the shared responsibility model proposed. Federal Risk and Authorization Management Program (FedRAMP) documentation will be helpful regarding the security aspects of shared

responsibilities, but operational aspects may require additional discussion with the provider.

a. Ordering Activity Information Assurance/Security Requirements Guidance

- (1) The Ordering Activity is responsible for ensuring to the maximum extent practicable that each requirement issued is in compliance with the Federal Information Security Management Act (FISMA) as applicable.
- (2) The Ordering Activity shall assign a required impact level for confidentiality, integrity and availability (CIA) prior to issuing the initial statement of work.² The Contractor must be capable of meeting at least the minimum security requirements assigned against a low-impact information system in each CIA assessment area (per FIPS 200) and must detail the FISMA capabilities of the system in each of CIA assessment area.
- (3) Agency level FISMA certification, accreditation, and evaluation activities are the responsibility of the Ordering Activity. The Ordering Activity reserves the right to independently evaluate, audit, and verify the FISMA compliance for any proposed or awarded Cloud Computing Services.
- (4) The Ordering Activity has final responsibility for assessing the FedRAMP status of the service, complying with and making a risk-based decision to grant an Authorization to Operate (ATO) for the cloud computing service, and continuous monitoring. A memorandum issued by the Office of Management and Budget (OMB) on Dec 8, 2011 outlines the responsibilities of Executive departments and agencies in the context of FedRAMP compliance.
- (5) Ordering activities are responsible for determining any additional information assurance and security related requirements based on the nature of the application and relevant mandates.

b. Deployment Model

If a particular deployment model (Private, Public, Community, or Hybrid) is desired, Ordering Activities are responsible for identifying the desired model(s). Alternately, Ordering Activities could identify requirements and assess Contractor responses to determine the most appropriate deployment model(s).

c. Delivery Schedule

The Ordering Activity shall specify the delivery schedule as part of the initial requirement. The Delivery Schedule options are found in Information for Ordering Activities Applicable to All Special Item Numbers.

d. Interoperability

Ordering Activities are responsible for identifying interoperability requirements. Ordering Activities should clearly delineate requirements for API implementation and standards conformance.

e. Performance of Cloud Computing Services

The Ordering Activity should clearly indicate any custom minimum service levels, performance and scale requirements as part of the initial requirement.

f. Reporting

The Ordering Activity should clearly indicate any cost, performance or availability reporting as part of the initial requirement.

g. Privacy

The Ordering Activity should specify the privacy characteristics of their service and engage with the Contractor to determine if the cloud service is capable of meeting Ordering Activity requirements. For example, a requirement could be requiring assurance that the service is capable of safeguarding Personally Identifiable Information (PII), in accordance with NIST SP 800-122⁴ and OMB memos M-06-16⁵ and M-07-16⁶. An Ordering Activity will determine what data elements constitute PII according to OMB Policy, NIST Guidance and Ordering Activity policy.

h. Accessibility

The Ordering Activity should specify the accessibility characteristics of their service and engage with the Contractor to determine the cloud service is capable of meeting Ordering Activity requirements. For

example, a requirement could require assurance that the service is capable of providing accessibility based on Section 508 of the Rehabilitation Act of 1973 (29 U.S.C. 794d).

i. Geographic Requirements

Ordering activities are responsible for specifying any geographic requirements and engaging with the Contractor to determine that the cloud services offered have the capabilities to meet geographic requirements for all anticipated task orders. Common geographic concerns could include whether service data, processes and related artifacts can be confined on request to the United States and its territories, or the continental United States (CONUS).

j. Data Ownership and Retrieval and Intellectual Property

Intellectual property rights are not typically transferred in a cloud model. In general, CSPs retain ownership of the Intellectual Property (IP) underlying their services and the customer retains ownership of its intellectual property. The CSP gives the customer a license to use the cloud services (i.e. IaaS, etc.) for the duration of the contract without transferring rights. The government retains ownership of the IP and data they bring to the customized use of the service as spelled out in the FAR and related materials.

General considerations of data ownership and retrieval are covered under the terms of Schedule 70 and the FAR and other laws, ordinances, and regulations (Federal, State, City, or otherwise). Because of considerations arising from cloud shared responsibility models, ordering activities should engage with the Contractor to develop more cloud-specific understandings of the boundaries between data owned by the government and that owned by the cloud service provider, and the specific terms of data retrieval.

In all cases, the Ordering Activity should enter into an agreement with a clear and enforceable understanding of the boundaries between government and cloud service provider data, and the form, format and mode of delivery for each kind of data belonging to the government.

The Ordering Activity should expect that the Contractor shall transfer data to the government at the government's request at any time, and in all cases when the service or order is terminated for any reason, by means, in formats and within a scope clearly understood at the initiation of the service. Example cases that might require clarification include status and mode of delivery for:

- Configuration information created by the government and affecting the government's use of the cloud provider's service.
- Virtual machine configurations created by the government but operating on the cloud provider's service.
- Profile, configuration and other metadata used to configure SaaS application services or PaaS platform services.

The key is to determine in advance the ownership of classes of data and the means by which Government owned data can be returned to the Government.

k. Service Location Distribution

The Ordering Activity should determine requirements for continuity of operations and performance and engage with the Contractor to ensure that cloud services have adequate service location distribution to meet anticipated requirements. Typical concerns include ensuring that:

1. Physical locations underlying the cloud are numerous enough to provide continuity of operations and geographically separate enough to avoid an anticipated single point of failure within the scope of anticipated emergency events.
2. Service endpoints for the cloud are able to meet anticipated performance requirements in terms of geographic proximity to service requestors.

Note that cloud providers may address concerns in the form of minimum distance between service locations, general regions where service locations are available, etc.

5. GUIDANCE FOR CONTRACTORS

This section offers guidance for interpreting the Contractor Description Requirements in Table 2, including the NIST essential cloud characteristics, service models and deployment models. This section is not a list of requirements.

Contractor-specific definitions of cloud computing characteristics and models or significant variances from the NIST essential characteristics or models are discouraged and will not be considered in the scope of this SIN or accepted in response to Factors for Evaluation. The only applicable cloud characteristics, service model/subcategories and deployment models for this SIN will be drawn from the NIST 800-145 special publication. Services qualifying for listing as cloud computing services (i.e. IaaS, etc.) under this SIN must substantially satisfy the essential characteristics of cloud computing as documented in the NIST Definition of Cloud Computing [SP 800-145](#)⁷.

Contractors must select deployment models corresponding to each way the service can be deployed. Multiple deployment model designations for a single cloud service are permitted but at least one deployment model must be selected.

In addition, contractors submitting Cloud services (i.e. IaaS, etc.) for listing under this SIN are encouraged to select a sub-category for each Cloud service (i.e. IaaS, etc.) proposed under this SIN with respect to a single principal NIST cloud service model that most aptly characterizes the service. Cloud Service model (i.e. IaaS, etc.) categorization is optional.

Both Cloud service model (i.e. IaaS, etc.) and deployment model (i.e. public, etc.) designations must accord with NIST definitions. Guidance is offered in this document on making the most appropriate selection

- a. NIST Essential Characteristics

General Guidance

NIST's essential cloud characteristics provide a consistent metric for whether a service is eligible for inclusion in this SIN. It is understood that due to legislative, funding and other constraints that government entities cannot always leverage a cloud service to the extent that all NIST essential characteristics are commercially available. For the purposes of the Cloud SIN, meeting the NIST essential characteristics is determined by whether each essential capability of the commercial service is available for the service, whether or not the Ordering Activity actually requests or implements the capability. The guidance in Table 3 offers examples of how services might or might not be included based on the essential characteristics, and how the Contractor should interpret the characteristics in light of current government contracting processes.

Table 3: Guidance on Meeting NIST Essential Characteristics

Characteristic	Capability	Guidance
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<p>On-demand self-service</p>	<ul style="list-style-type: none"> ● Ordering activities can directly provision services without requiring Contractor intervention. ● This characteristic is typically implemented via a service console or programming interface for provisioning 	<p>Government procurement guidance varies on how to implement on-demand provisioning at this time.</p> <p>Ordering activities may approach on-demand in a variety of ways, including “not-to-exceed” limits, or imposing monthly or other appropriate payment cycles on what are essentially on demand services.</p> <p>Services under this SIN must be capable of true on-demand self-service, and ordering activities and Contractors must negotiate how they implement on demand capabilities in practice at the task order level:</p> <ul style="list-style-type: none"> ● Ordering activities must specify their procurement approach and requirements for on-demand service ● Contractors must propose how they intend to meet the approach ● Contractors must certify that on-demand self-service is technically available for their service should procurement guidance become available.
<p>Broad Network Access</p>	<ul style="list-style-type: none"> ● Ordering activities are able to access services over standard agency networks ● Service can be accessed and provisioned using standard devices such as browsers, tablets and mobile phones 	<ul style="list-style-type: none"> ● Broad network access must be available without significant qualification and in relation to the deployment model and security domain of the service ● Contractors must specify any ancillary activities, services or equipment required to access cloud services or integrate cloud with other cloud or non-cloud networks and services. For example, a private cloud might require an Ordering Activity to purchase or provide a dedicated router, etc. which is acceptable but should be indicated by the Contractor.
<p>Resource Pooling</p>	<ul style="list-style-type: none"> ● Pooling distinguishes cloud services from simple offsite hosting. ● Ordering activities draw resources from a common pool maintained by the Contractor 	<ul style="list-style-type: none"> ● The cloud service must draw from a pool of resources and provide an automated means for the Ordering Activity to dynamically allocate them. ● Manual allocation, e.g. manual operations at a physical server farm where Contractor staff configure servers in response to Ordering

	<ul style="list-style-type: none"> ● Resources may have general characteristics such as regional location 	<p>Activity requests, does not meet this requirement</p> <ul style="list-style-type: none"> ● Similar concerns apply to software and platform models; automated provisioning from a pool is required ● 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.
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Rapid Elasticity	<ul style="list-style-type: none"> ● Rapid provisioning and de-provisioning commensurate with demand 	<ul style="list-style-type: none"> ● Rapid elasticity is a specific demand-driven case of self-service ● 'Rapid' should be understood as measured in minutes and hours, not days or weeks. ● Elastic capabilities by manual request, e.g. via a console operation or programming interface call, are required. ● Automated elasticity which is driven dynamically by system load, etc. is optional. Contractors must specify whether automated demand-driven elasticity is available and the
Measured Service	<ul style="list-style-type: none"> ● Measured service should be understood as a reporting requirement that enables an Ordering Activity to control their use in cooperation with self service 	<ul style="list-style-type: none"> ● Procurement guidance for on-demand self-service applies to measured service as well, i.e. rapid elasticity must be technically available but ordering activities and Contractors may mutually designate other contractual arrangements. ● Regardless of specific contractual arrangements, reporting must indicate actual usage, be continuously available to the Ordering Activity, and provide meaningful metrics appropriate to the service measured ● Contractors must specify that measured service is available and the general sort of metrics and mechanisms available ● The goal of the Measured Service requirement is to ensure Ordering Activities realize the full benefit of "pay as you go" consumption models. Consumption measurements that are not discrete enough or frequent enough (greater than 30 days), will not fulfill this NIST essential characteristic and will not be eligible for

Inheriting Essential Characteristics

Cloud Services (i.e. IaaS, etc.) may depend on other cloud services, and cloud service models such as PaaS and SaaS are able to inherit essential characteristics from other cloud services that support them. For example a PaaS platform service can inherit the broad network access made available by the IaaS service it runs on, and in such a situation would be fully compliant with the broad network access essential characteristic. Cloud Services (i.e. IaaS, etc.) inheriting essential characteristics must make the inherited characteristic fully available at their level of delivery to claim the relevant characteristic by inheritance.

Inheriting characteristics does not require the inheriting provider to directly bundle or integrate the inherited service, but it does require a reasonable measure of support and identification. For example, the Ordering Activity may acquire an IaaS service from "Provider A" and a PaaS service from "Provider B". The PaaS service may inherit broad network access from "Provider A" but must identify and support the inherited service as an acceptable IaaS provider

Assessing Broad Network Access

Typically broad network access for public deployment models implies high bandwidth access from the public internet for authorized users. In a private cloud deployment internet access might be considered broad access, as might be access through a dedicated shared high bandwidth network connection from the Ordering Activity, in

accord with the private nature of the deployment model.

Resource Pooling and Private Cloud

All cloud resource pools are finite, and only give the appearance of infinite when sufficiently large, as is sometimes the case with a public cloud. The resource pool supporting a private cloud is typically smaller with more visible limits. A finite pool of resources purchased as a private cloud service qualifies as resource pooling so long as the resources within the pool can be dynamically allocated to the ultimate users of the resource, even though the pool itself appears finite to the Ordering Activity that procures access to the pool as a source of dynamic service allocation.

NIST Service Model

The Contractor may optionally document the service model of cloud computing (e.g. IaaS, PaaS, SaaS, or a combination thereof, that most closely describes their offering, using the definitions in The NIST Definition of Cloud Computing SP 800-145. The following guidance is offered for the proper selection of service models.

NIST's service models provide this SIN with a set of consistent sub-categories to assist ordering activities in locating and comparing Cloud services (i.e. IaaS, etc.) of interest. Service model is primarily concerned with the nature of the service offered and the staff and activities most likely to interact with the service. Contractors should select a single service model most closely corresponding to their proposed service based on the guidance below. It is understood that cloud services can technically incorporate multiple service models and the intent is to provide the single best categorization of the service.

Contractors should take care to select the NIST service model most closely corresponding to each service offered. Contractors should not invent, proliferate or select multiple cloud service model sub-categories to distinguish their offerings, because ad-hoc categorization prevents consumers from comparing similar offerings. Instead vendors should make full use of the existing NIST categories to the fullest extent possible.

For example, in this SIN an offering commercially marketed by a Contractor as "Storage as a Service" would be properly characterized as Infrastructure as a Service (IaaS), storage being a subset of infrastructure. Services commercially marketed as "LAMP as a Service" or "Database as a Service" would be properly characterized under this SIN as Platform as a Service (PaaS), as they deliver two kinds of platform services. Services commercially marketed as "Travel Facilitation as a Service" or "Email as a Service" would be properly characterized as species of Software as a Service (SaaS) for this SIN.

However, Contractors can and should include appropriate descriptions (include commercial marketing terms) of the service in the full descriptions of the service's capabilities.

When choosing between equally plausible service model sub-categories, Contractors should consider several factors:

- (1) **Visibility to the Ordering Activity.** Service model sub-categories in this SIN exist to help Ordering Activities match their requirements with service characteristics. Contractors should select the most intuitive and appropriate service model from the point of view of an Ordering Activity.
- (2) **Primary Focus of the Cloud Service (i.e. IaaS, etc.).** Services may offer a mix of capabilities that span service models in the strict technical sense. For example, a service may offer both IaaS capabilities for processing and storage, along with some PaaS capabilities for application deployment, or SaaS capabilities for specific applications. In a service mix situation the Contractor should select the service model that is their primary focus. Alternatively contractors may choose to submit multiple service offerings for the SIN, each optionally and separately subcategorized.
- (3) **Ordering Activity Role.** Contractors should consider the operational role of the Ordering Activity's primary actual consumer or operator of the service. For example services most often consumed by system managers are likely to fit best as IaaS; services most often consumed by application deployers or developers as PaaS, and services most often consumed by business users as SaaS.
- (4) **Lowest Level of Configurability.** Contractors can consider IaaS, PaaS and SaaS as an ascending hierarchy of complexity, and select the model with the lowest level of available Ordering Activity interaction. As an example, virtual machines are an IaaS service often bundled with a range of operating systems, which are PaaS services. The Ordering Activity usually has access to configure the lower level IaaS service, and the

overall service should be considered IaaS. In cases where the Ordering Activity cannot configure the speed, memory, network configuration, or any other aspect of the IaaS component, consider categorizing as a PaaS service.

Cloud management and cloud broker services should be categorized based on their own characteristics and not those of the other cloud services that are their targets. Management and broker services typically fit the SaaS service model, regardless of whether the services they manage are SaaS, PaaS or IaaS. Use Table 3 to determine which service model is appropriate for the cloud management or cloud broker services, or, alternately choose not to select a service model for the service.

The guidance in Table 4 offers examples of how services might be properly mapped to NIST service models and how a Contractor should interpret the service model sub- categories.

Table 4: Guidance on Mapping to NIST Service Models

Service Model	Guidance
Infrastructure as a Service (IaaS)	<p>Select an IaaS model for service based equivalents of hardware appliances such as virtual machines, storage devices, routers and other physical devices.</p> <ul style="list-style-type: none"> ● IaaS services are typically consumed by system or device managers who would configure physical hardware in a non-cloud setting ● The principal customer interaction with an IaaS service is provisioning then configuration, equivalent to procuring and then configuring a physical device. <p>Examples of IaaS services include virtual machines, object storage, disk block storage, network routers and firewalls, software defined networks.</p> <p>Gray areas include services that emulate or act as dedicated appliances and are directly used by applications, such as search appliances, security appliances, etc. To the extent that these services or their emulated devices provide direct capability to an application they might be better classified as Platform services (PaaS). To the extent that they resemble raw hardware and are consumed by other platform services they are better classified as IaaS.</p>
Platform as a Service (PaaS)	<p>Select a PaaS model for service based equivalents of complete or partial software platforms. For the purposes of this classification, consider a platform as a set of software services capable of deploying all or part of an application.</p> <ul style="list-style-type: none"> ● A complete platform can deploy an entire application. Complete platforms can be proprietary or open source ● Partial platforms can deploy a component of an application which combined with other components make up the entire deployment ● PaaS services are typically consumed by application deployment staff whose responsibility is to take a completed agency application and cause it to run on the designated complete or partial platform service ● The principal customer interaction with a PaaS service is deployment, equivalent to deploying an application or portion of an application on a software platform service. ● A limited range of configuration options for the platform service may be available. <p>Examples of complete PaaS services include:</p> <ul style="list-style-type: none"> ● A Linux/Apache/MySQL/PHP (LAMP) platform ready to deploy a customer PHP application, ● a Windows .Net platform ready to deploy a .Net application,

	<ul style="list-style-type: none"> • A custom complete platform ready to develop and deploy an customer application in a proprietary language • A multiple capability platform ready to deploy an arbitrary customer application on a range of underlying software services. <p>The essential characteristic of a complete PaaS is defined by the customer's ability to deploy a complete custom application directly on the platform.</p> <p>PaaS includes partial services as well as complete platform services. Illustrative examples of individual platform enablers or components include:</p> <ul style="list-style-type: none"> • A database service ready to deploy a customer's tables, views and procedures, • A queuing service ready to deploy a customer's message definitions • A security service ready to deploy a customer's constraints and target applications for continuous monitoring <p>The essential characteristic of an individual PaaS component is the customer's ability to deploy their unique structures and/or data onto the component for a partial platform function.</p> <p>Note that both the partial and complete PaaS examples all have two things in common:</p> <ul style="list-style-type: none"> • They are software services, which offer significant core functionality out of the box • They must be configured with customer data and structures to deliver results <p>As noted in IaaS, operating systems represent a gray area in that OS is definitely a platform service, but is typically bundled with IaaS infrastructure. If your service provides an OS but allows for interaction with infrastructure, please sub-categorize it as IaaS. If your service "hides" underlying infrastructure, consider it as PaaS.</p>
Software as a Service (SaaS)	<p>Select a SaaS model for service based equivalents of software applications.</p> <ul style="list-style-type: none"> • SaaS services are typically consumed by business or subject-matter staff who would interact directly with the application in a non-cloud setting • The principal customer interaction with a SaaS service is actual operation and consumption of the application services the SaaS service provides. <p>Some minor configuration may be available, but the scope of the configuration is limited to the scope and then the permissions of the configuring user. For example an agency manager might be able to configure some aspects of the application for their agency but not all agencies. An agency user might be able to configure some aspects for themselves but not everyone in their agency.</p> <p>Typically only the Contractor would be permitted to configure aspects of the software for all users.</p> <p>Examples of SaaS services include email systems, business systems of all sorts such as travel systems, inventory systems, etc., wiki's, websites or content management systems, management applications that allow a customer to manage other cloud or non-cloud services, and in general any system where customers interact irectly for a business purpose.</p> <p>Gray areas include services that customers use to configure other cloud services, such as cloud management software, cloud brokers, etc. In general these sorts of systems should be considered SaaS, per guidance in this document.</p>

a. Deployment Model

Deployment models (e.g. private, public, community, or hybrid) are not restricted at the SIN level and any specifications for a deployment model are the responsibility of the Ordering Activity.

Multiple deployment model selection is permitted, but at least one model must be selected. The guidance in Table 4

offers examples of how services might be properly mapped to NIST deployment models and how the Contractor should interpret the deployment model characteristics. Contractors should take care to select the range of NIST deployment models most closely corresponding to each service offered.

Note that the scope of this SIN does not include hardware or software components used to construct a cloud, only cloud capabilities delivered as a service, as noted in the Scope section.

Table 5: Guidance for Selecting a Deployment Model

Deployment Model	Guidance
Private Cloud	The service is provided exclusively for the benefit of a definable organization and its components; access from outside the organization is prohibited. The actual services may be provided by third parties, and may be physically located as required, but access is strictly defined by membership in the owning organization.
Public Cloud	The service is provided for general public use and can be accessed by any entity or organization willing to contract for it.
Community Cloud	The service is provided for the exclusive use of a community with a definable shared boundary such as a mission or interest. As with private cloud, the service may be in any suitable location and administered by a community member or a third party.
Hybrid Cloud	The service is composed of one or more of the other models. Typically hybrid models include some aspect of transition between the models that make them up, for example a private and public cloud might be designed as a hybrid cloud where events like increased load permit certain specified services in the private cloud to run in a public cloud for extra capacity, e.g. bursting.

6. INFORMATION PERTAINING TO CLOUD RELATED IT PROFESSIONAL SERVICES

NOTE: Offerors may offer Cloud Services (i.e. IaaS, etc.) exclusively; it is not a requirement to also offer Cloud Related IT Professional Services. Similarly, offerors of Cloud Related IT Professional Services are not required to also offer Cloud Services (i.e. IaaS, etc.). Offerors who have capabilities in both Cloud Services (i.e. IaaS, etc.) and Cloud Related IT Professional Services may offer both, under this SIN.

NOTE: ****Labor categories under Special Item Number 132-51 “Information Technology Professional Services may remain under SIN 132-51, unless they are specific to the Cloud Computing Products and IT Professional Services 518210C. Labor specific to Cloud Computing should be positioned by Contractors under SIN 518210C in order for Contractors to have the opportunity to bid on requests for quotes that are generated exclusively under the Cloud SIN. Offerors may offer Cloud IT Professional Services exclusively; it is not a requirement to also offer Cloud Services (i.e. IaaS).

a. SCOPE OF 518210C Cloud Related IT Professional Services

- (1) The labor categories, prices, terms and conditions stated under Special Item Numbers 518210C Cloud Services and Related IT Professional Services apply exclusively to this SIN within the scope of this Information Technology Schedule. It is anticipated that the relevant IT Professional Services for this SIN (518210C) are related to the following: assessing cloud solutions, preparing for cloud solutions, refactoring legacy solutions for cloud migration, migrating legacy or other systems to cloud solutions, DevOps, developing new cloud based applications and providing management/governance for cloud solutions. Contractors may propose other types of relevant professional services as long as they are specifically designed to work within and/or support the types of cloud product services described in SIN 518210C.

- (2) Cloud Related IT Professional Services provided under this SIN shall comply with all certifications and industry standards as applicable pertaining to the type of services as specified by ordering agency.
- (3) The Contractor shall provide Cloud Related IT Professional Services at the Contractor's facility and/or at the ordering activity location, as agreed to by the Contractor and the ordering activity.

b. ORDER

- (1) Agencies may use written orders, Electronic Data Interchange (EDI) orders, Blanket Purchase Agreements, individual purchase orders, or task orders for ordering services under this contract. Blanket Purchase Agreements shall not extend beyond the end of the contract period; all services and delivery shall be made and the contract terms and conditions shall continue in effect until the completion of the order. Orders for tasks which extend beyond the fiscal year for which funds are available shall include FAR 52.232-19 (Deviation – May 2003) Availability of Funds for the Next Fiscal Year. The order shall specify the availability of funds and the period for which funds are available.
- (2) All task orders are subject to the terms and conditions of the contract. In the event of conflict between a task order and the contract, the contract will take precedence.

c. PERFORMANCE OF SERVICES

1. The Contractor shall commence performance of Cloud Related IT Professional Services on the date agreed to by the Contractor and the ordering activity.
2. The Contractor agrees to render Cloud Related IT Professional Services during normal working hours, unless otherwise agreed to by the Contractor and the ordering activity.
3. The ordering activity should include the criteria for satisfactory completion for each task in the Statement of Work or Delivery Order. Cloud Related IT Professional Services shall be completed in a good and workmanlike manner.
4. Any Contractor travel required in the performance of Cloud Related IT Professional Services must comply with the Federal Travel Regulation or Joint Travel Regulations, as applicable, in effect on the date(s) the travel is performed. Established Federal Government per diem rates will apply to all Contractor travel. Contractors cannot use GSA city pair contracts. All travel will be agreed upon with the client prior to the Contractor's travel.

d. INSPECTION OF SERVICES

Inspection of services is in accordance with 552.212-4 CONTRACT TERMS AND CONDITIONS–COMMERCIAL ITEMS (JAN 2017) (DEVIATION – FEB 2007) (DEVIATION - FEB 2018) for Firm-Fixed Price orders; or GSAR 552.212-4 CONTRACT TERMS AND CONDITIONS-COMMERCIAL ITEMS (JAN 2017) (DEVIATION - FEB 2018) (ALTERNATE I - JAN 2017) (DEVIATION - FEB 2007) for Time-and-Materials and Labor- Hour Contracts orders placed under this contract.

e. RESPONSIBILITIES OF THE CONTRACTOR

The Contractor shall comply with all laws, ordinances, and regulations (Federal, State, City, or otherwise) covering work of this character. If the end product of a task order is software, then FAR 52.227-14 (MAY 2014) Rights in Data – General, may apply.

The Contractor shall comply with contract clause (52.204-21) to the Federal Acquisition Regulation (FAR) for the basic safeguarding of contractor information systems that process, store, or transmit Federal data received by the contract in performance of the contract. This includes contract documents and all information generated in the performance of the contract.

f. RESPONSIBILITIES OF THE ORDERING ACTIVITY

Subject to the ordering activity's security regulations, the ordering activity shall permit Contractor access to all facilities necessary to perform the requisite Cloud Computing IT Professional Services.

g. INDEPENDENT CONTRACTOR

All Cloud Computing IT Professional Services performed by the Contractor under the terms of this contract shall be as an independent Contractor, and not as an agent or employee of the ordering activity.

h. ORGANIZATIONAL CONFLICTS OF INTEREST

(1) Definitions.

“Contractor” means the person, firm, unincorporated association, joint venture, partnership, or corporation that is a party to this contract.

“Contractor and its affiliates” and “Contractor or its affiliates” refers to the Contractor, its chief executives, directors, officers, subsidiaries, affiliates, subcontractors at any tier, and consultants and any joint venture involving the Contractor, any entity into or with which the Contractor subsequently merges or affiliates, or any other successor or assignee of the Contractor.

An “Organizational conflict of interest” exists when the nature of the work to be performed under a proposed ordering activity contract, without some restriction on ordering activities by the Contractor and its affiliates, may either (i) result in an unfair competitive advantage to the Contractor or its affiliates or (ii) impair the Contractor’s or its affiliates’ objectivity in performing contract work.

To avoid an organizational or financial conflict of interest and to avoid prejudicing the best interests of the ordering activity, ordering activities may place restrictions on the Contractors, its affiliates, chief executives, directors, subsidiaries and subcontractors at any tier when placing orders against schedule contracts. Such restrictions shall be consistent with FAR 9.505 and shall be designed to avoid, neutralize, or mitigate organizational conflicts of interest that might otherwise exist in situations related to individual orders placed against the schedule contract. Examples of situations, which may require restrictions, are provided at FAR 9.508.

i. INVOICES

The Contractor, upon completion of the work ordered, shall submit invoices for Cloud Computing IT Professional Services. Progress payments may be authorized by the ordering activity on individual orders if appropriate. Progress payments shall be based upon completion of defined milestones or interim products. Invoices shall be submitted monthly for recurring IT professional services performed during the preceding month.

j. PAYMENTS

The ordering activity shall pay the Contractor upon submission of proper invoices or vouchers, the prices stipulated in this contract for service rendered and accepted. Progress payments shall be made only when authorized by the order. Payments shall be made in accordance with:

For orders that are NOT time-and-materials/labor hours (fixed price applicable).

- GSAR 552.212-4 CONTRACT TERMS AND CONDITIONS—COMMERCIAL ITEMS (JAN 2017) (DEVIATION – FEB 2007) (DEVIATION - FEB 2018)

For orders that are time-and-materials/labor hours.

- GSAR 552.212-4 CONTRACT TERMS AND CONDITIONS-COMMERCIAL ITEMS (JAN 2017) (DEVIATION - FEB 2018) (ALTERNATE I - JAN 2017) (DEVIATION - FEB 2007)
- FAR 52.216-31 (Feb 2007) Time-and Materials/Labor-Hour Proposal Requirements— Commercial Item Acquisition. As prescribed in 16.601(f)(3), insert the following provision:
 - (1) The Government contemplates award of a Time-and-Materials or Labor-Hour type of contract resulting from this solicitation.
 - (2) The offeror must specify fixed hourly rates in its offer that include wages, overhead, general and administrative expenses, and profit. The offeror must specify whether the fixed hourly rate for each labor category applies to labor performed by-
 - i The offeror;
 - ii Subcontractors; and/or
 - iii Divisions, subsidiaries, or affiliates of the offeror under a common control.]

k. RESUMES

Resumes shall be provided to the GSA Contracting Officer or the user ordering activity upon request.

I. APPROVAL OF SUBCONTRACTS

The ordering activity may require that the Contractor receive, from the ordering activity's Contracting Officer, written consent before placing any subcontract for furnishing any of the work called for in a task order.

m. DESCRIPTION OF CLOUD COMPUTING LABOR HOURS AND PRICING

- (1) The Contractor shall provide a description of each type of Cloud Computing Professional Service offered under Special Item Numbers 518210C and it should be presented in the same manner as the Contractor sells to its commercial and other ordering activity customers. If the Contractor is proposing hourly rates, a description of all corresponding commercial job titles (labor categories) for those individuals who will perform the service should be provided.
- (2) Pricing for all Cloud Computing IT Professional Services shall be in accordance with the Contractor's customary commercial practices; e.g., hourly rates,, minimum general experience and minimum education.

The following is an example of the manner in which the description of a commercial job title should be presented (see SCP FSS 004).

EXAMPLE

Commercial Job Title: Senior Cloud Subject Matter Expert

Description: Provides highest-level cloud computing domain expertise to large scale and complex projects as a client resource. Leads teams and client interaction from workflow design to cloud solution deliverables.

Professionals involved in this specialty perform the following tasks:

- Provides in-depth knowledge and expertise from cloud computing and business domains
- Develops and improves technical and business requirements documentation and specifications
- Reviews client requirements during on-boarding and other project phases
- Presents alternatives to client based designs based on impact to cost, performance and outcomes
- Incorporates enterprise architecture designs from business unit services strategies
- Provides advisory services to the service provider, cross functional teams, and clients

Knowledge, Skills and Abilities: Documented track record of successful client engagements in large public sector enterprise environments. 10+ years experience with SOAP, JSON, J2EE, SML, REST, OAuth, SAML, and OpenID. 4+ years experience with AD, LDAP, ODBC, SSO, CAC/PIV, STS, SSL, IEP, 3DES, 2-Factor, and STIG. Proficient with SDLC, AWS, and Oracle. Ability to thrive in a dynamic public sector environment.

Minimum Experience: 10 Years

Minimum Education Requirements: an MS degree in computer science or equivalent.

Highly Desirable: Deep knowledge of Microsoft Azure and Amazon Web Services core service offerings

SIN 518210C Cloud Services LABOR CATEGORY DESCRIPTION

Commercial Job Title: Cloud Computing Specialist

Minimum/General Experience: 2

Functional Responsibility: Cloud based design, definition and development custom modules, features, and package integration from proposal to product. Document features, modules, requirements, and the risks of each Cloud based initiative. Design system architecture and interface control using requirements.
Minimum Education: Bachelor

Commercial Job Title: Cloud Architect

Minimum/General Experience: 3

Functional Responsibility: Oversees the cloud requirements analysis, conceptual design, detailed design, and implementation of a cloud project; Oversees the migration of a cloud effort, Generates/approves requisite cloud documentation, Generates customer design review materials and presents at customer design reviews.
Minimum Education: Bachelor

Commercial Job Title: Cloud Administrator

Minimum/General Experience: 3

Functional Responsibility: Has strong understanding of Cloud information flows and process architecture necessary for implementation of cloud security; Uses information technology to plan, prepare, and execute cloud related security tasks; Prepares and reviews Cloud security architecture; Applies knowledge of security requirements, documentation, and risk mitigation strategies; Develops Cloud design documentation; Implements Cloud security policies and procedures; Conducts Cloud security audits against contractual requirements.
Minimum Education: Bachelor

Commercial Job Title: Cloud Security Specialist

Minimum/General Experience: 3

Functional Responsibility: Has strong understanding of Cloud information flows and process Architecture necessary for implementation of cloud security; Uses information technology to plan, prepare, and execute cloud related security tasks; Prepares and reviews Cloud security architecture's Applies knowledge of security requirements, documentation, and risk mitigation strategies; Develops Cloud design documentation; Implements Cloud security policies and procedures; Conducts Cloud security audits against contractual requirements.
Minimum Education: Bachelor

Commercial Job Title: Cloud Systems Engineer

Minimum/General Experience: 3

Functional Responsibility: Participates in the requirements definition process; Performs conceptual design, detailed design, code, and unit test of critical software programs within a subsystem; Leads integration testing of programs within a subsystem; Generates formal design documentation; Generates Interface Control Documents, documenting the interfaces between programs; Supports the development of Acceptance Test Plan and Procedures documents; Supports the development of customer design review materials; Designs, develops, and manages databases.
Minimum Education: Bachelor

Commercial Job Title: Cloud Subject Matter Expert

Minimum/General Experience: 4

Functional Responsibility: Provides advice, guidance, or expertise in domains related to our customer's mission and/or subject areas such as systems architecture, software architecture, cloud computing, infrastructure, security, business process reengineering, automation, software development lifecycle, visual design, information architecture, content management, web design, accessibility, mobile and digital strategy, portal design, and systems integration.
Minimum Education: Bachelor