



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

Schedule: Multiple Award Schedule (MAS)

The Informatics  
Applications Group, Inc.  
(tiag)

11911 Freedom Drive, Ste. 1180  
Reston, VA 20190

Contract Number: GS-35F-0738N

Contract Period: June 26, 2003 - June 25, 2023

Pricelist Version: PS-A812 dated Feb. 21, 2020

DUNS: 065245750

NAICS: 541511

Business Size: Other than Small Business

Neil Lampton, President/COO

PHONE:  
703-437-7878

FAX:  
703-435-3113

EMAIL:  
[nlampton@tiag.net](mailto:nlampton@tiag.net)

SIN	Description
ANCILLARY	Ancillary Supplies and Services
OLM	Order-Level Materials (OLM)
518210C	Cloud and Cloud-Related IT Professional Services
54151HACS	Highly Adaptive Cybersecurity Services (HACS)
54151HEAL	Health Information Technology Services
54151S	Information Technology Professional Services
D302	IT Systems Development Services
D306	IT Systems Analysis Services
D307	Automated Information Systems Design and Integration Services
D308	Programming Services
D310	IT Backup and Security Services
D311	IT Data Conversion Services
D399	Other IT Services, Not elsewhere classified

1. All non-professional labor categories must be incidental to and used solely to support hardware, software and/or professional services, and cannot be purchased separately.

2. Offeror's and Agencies are advised that the Group 70 - Information Technology Schedule is not to be used as a means to procure services which properly fall under the Brooks Act. These services include, but are not limited to, architectural, engineering, mapping, cartographic production, remote sensing, geographic information systems, and related services. FAR 36.6 distinguishes between mapping services of an A/E nature and mapping services which are not connected nor incidental to the traditionally accepted A/E Services

3. This solicitation is not intended to solicit for the reselling of IT Professional Services, except for the provision of implementation, maintenance, integration, or training services in direct support of a product. Under such circumstances, the services must be performance by the publisher or manufacturer or one of their authorized agents.

On-line access to contract ordering information, terms and conditions, up-to-date pricing, and the option to create an electronic delivery order are available through GSA *Advantage!*®, a menu-driven database system. The INTERNET address GSA *Advantage!*® is: [GSAAdvantage.gov](http://GSAAdvantage.gov).

For more information on ordering from Federal Supply Schedules click on the FSS Schedules button at [fss.gsa.gov](http://fss.gsa.gov).



## About Us

tiag® is an innovative technology company providing strategic, transformational solutions to private industry and across the Department of Defense.

At tiag, our greatest asset is our people. Our unique, unified company culture attracts brilliant, creative, well-credentialed business and technology professionals who share an entrepreneurial spirit and ardent desire to make a true difference for customers. Our commitment to taking care of our people inspires the dedication and longevity of our teams, ensuring success and continuity for client initiatives.

tiag's strategic quality control management system and processes amplify our company-wide focus on excellence – ensuring the highest degree of management processes, solutions and work products we create and deliver for our customers. Notably, tiag has achieved prestigious International Organization for Standardization (ISO®) 9001:2015 certification for quality management systems (QMS), and is appraised at Level 3 of CMMI® Institute's Capability Maturity Model® Integration (CMMI) for Services.

- Customers choose tiag because we drive genuine innovation for our customers and deliver value beyond the scope of work. Our innovative solutions and services range from complex enterprise-wide solutions to stand-alone custom projects, among them [Cloud Integration and Data Center Consolidation](#) - Migrating essential applications and services to cloud-based environments, tiag balances the use of local servers and the cloud to achieve efficient operational and rapid scalability while ensuring compliance and security.
- [Mobile Platform and Software Development](#) - Implementing strategies that successfully transform business operations for maximum flexibility, tiag synthesizes interactive, Agile-based approaches with milestone-driven traditional software and system engineering methods.
- [Data Analytics](#) - Providing flawless data analytics and optimization services to ensure effective data patterns in the automation and merge of data from multiple databases, tiag tailors solutions specific to the client's mission, situation and environment.
- [Cybersecurity and Information Assurance](#) - tiag provides cybersecurity and IA services support ranging from leadership guidance, policy development and security assessment to independent verification and validation, certification and accreditation, plan of action and milestone development, incident response and security awareness training.
- [Clinical and Business Informatics](#) - Defining processes that help health care organizations achieve organizational performance targets, our physicians, nurses and business informatics professionals understand that the patient/health care provider relationship is most vital to the mission.
- [User-Centered Design](#) - Maximizing product utility and desirability while minimizing the need for rework and revision, tiag combines behavioral science and the art of user-centered design to eliminate usage barriers and heighten product success. Our UX experts test and validate products with end-users, delivering designs and processes from conception to implementation.
- [Infrastructure Optimization and IT Service Management](#) - tiag certified professionals bring vast IT expertise, business experience and leadership strengths to streamline and consolidate processes while automating labor-intensive tasks.
- [Strategic Planning, Program and Project Management](#) - Focusing on timelines, transparency, security, usability and value for the customer, tiag ensures delivery of high value initiatives and achieves winning results in leading large-scale enterprises through change.
- [Business Transformation](#) - tiag BT professionals ensure highly successful transformations that align people, processes and technology initiatives with the organization's strategic vision and mission. Defining the depth of necessary changes and redesigning internal processes, our team delivers flexible solutions, from roadmap to adoption and continuous process improvements.
- [Enterprise Architecture](#) - Applying DoD prescribed models and approaches supporting agile systems development and framework conceptualization, tiag teams lead numerous successful EA transformations for diverse health care organizations across defense health.

## Contents

1a. Table of Awarded Special Item Numbers (SINs): .....	5
1b. Identification of the lowest priced model number and lowest unit price for each SIN: .....	5
1c. Description of All Labor Categories: .....	5
2. Maximum order:.....	5
3. Minimum order: .....	5
4. Geographic coverage (delivery area): .....	5
5. Point(s) of production (city, county, and State or foreign country). .....	5
6. Discount from list prices or statement of net price. ....	5
7. Quantity Discounts:.....	5
8. Prompt payment terms: .....	5
9a. Notification that Government purchase cards are accepted at or below the micro-purchase threshold: .....	5
9b. Notification whether Government purchase cards are accepted or not accepted above the micro-purchase threshold:.....	5
10. Foreign Items (list items by country of origin): .....	5
11a. Time of Delivery: (Contractor insert number of days.) .....	5
11b. Expedited Delivery:.....	5
11c. Overnight and 2-day delivery: .....	5
11d. Urgent Requirements:.....	5
12. F.O.B. point(s): .....	5
13a. Ordering address(es): .....	5
13b. Ordering procedures:.....	6
14. Payment address(es). .....	6
15. Warranty provision: .....	6
16. Export packing charges, if applicable: .....	6
17. Terms and conditions of Government purchase card acceptance (any thresholds above the micro-purchase level): .....	6
18. Terms and conditions of rental, maintenance, and repair (if applicable). ....	6
19. Terms and conditions of installation (if applicable): .....	6
20. Terms and conditions of repair parts indicating date of parts price lists and any discounts from list prices (if applicable). ....	6
20a. Terms and conditions for any other services (if applicable). ....	6
21. List of service and distribution points (if applicable). ....	6
22. List of participating dealers (if applicable). ....	6
23. Preventive maintenance (if applicable). ....	6
24a. Special attributes such as environmental attributes (e.g., recycled content, energy efficiency, and/or reduced pollutants).....	6

24b. Section 508 compliance for EIT:.....	6
25. Data Universal Number System (DUNS) number. ....	6
26. Notification regarding registration in System for Award Management (SAM) database. ....	6
Exhibit A: Labor Category Rates .....	7
SCLS MATRIX .....	7
TERMS AND CONDITIONS APPLICABLE TO PURCHASE OF CLOUD COMPUTING PRODUCTS AND CLOUD RELATED IT PROFESSIONAL SERVICES (SPECIAL ITEM NUMBER 518210C) .....	13
CLOUD LABOR CATEGORY DESCRIPTIONS - 518210C .....	30
TERMS AND CONDITIONS APPLICABLE TO HIGHLY ADAPTIVE CYBERSECURITY SERVICES (HACS) (SPECIAL ITEM NUMBERS 54151HACS).....	34
CYBERSECURITY LABOR CATEGORY DESCRIPTIONS - 54151HACS.....	38
TERMS AND CONDITIONS APPLICABLE TO INFORMATION TECHNOLOGY (IT) PROFESSIONAL SERVICES (SPECIAL ITEM NUMBER 54151S) .....	49
IT LABOR CATEGORY DESCRIPTIONS - 54151S .....	52
TERMS AND CONDITIONS APPLICABLE TO HEALTH INFORMATION TECHNOLOGY (IT) SERVICES (SPECIAL ITEM NUMBER 54151HEAL) .....	68
HEALTH IT LABOR CATEGORY DESCRIPTIONS - 54151HEAL.....	70
TERMS AND CONDITIONS APPLICABLE TO ANCILLARY SUPPLIES AND /OR SERVICES (SPECIAL ITEM NUMBER ANCILLARY).....	82
ANCILLARY LABOR CATEGORY DESCRIPTIONS - ANCILLARY.....	82

**1a. Table of Awarded Special Item Numbers (SINs):**

Ancillary - Ancillary Supplies and Services  
 OLM - Order-Level Materials (OLM)  
 518210C/RC - Cloud and Cloud-Related IT Professional Services  
 54151HACS/RC - Highly Adaptive Cybersecurity Services (HACS)  
 54151HEAL/RC - Health Information Technology Services  
 54151S/RC - Information Technology Professional Services

**1b. Identification of the lowest priced model number and lowest unit price for each SIN:**

See Exhibit A.

**1c. Description of All Labor Categories:**

See Exhibit B.

**2. Maximum order:**

Ancillary - \$250,000  
 OLM - \$250,000  
 518210C/RC - \$500,000  
 54151HACS/RC - \$500,000  
 54151HEAL/RC - \$500,000  
 54151S/RC - \$500,000

**3. Minimum order:**

\$100.00

**4. Geographic coverage (delivery area):**

Domestic Delivery Only (the 48 contiguous states, D.C., Hawaii, Alaska, and US Territories). Domestic Delivery also includes a port of consolidation point, within the aforementioned areas, for orders received from overseas activities.

**5. Point(s) of production (city, county, and State or foreign country).**

tiag  
 11911 Freedom Drive, Ste. 1180  
 Reston, VA 20190

**6. Discount from list prices or statement of net price.**

Prices are listed as GSA Net. Discount deducted and IFF included.

**7. Quantity Discounts:**

None

**8. Prompt payment terms:**

Net 30. "Information for Ordering Offices: Prompt payment terms cannot be negotiated out of the contractual agreement in exchange for other concessions."

**9a. Notification that Government purchase cards are accepted at or below the micro-purchase threshold:**

Yes, tiag accepts Government purchase cards at or below the micro-purchase threshold.

**9b. Notification whether Government purchase cards are accepted or not accepted above the micro-purchase threshold:**

Yes, tiag accepts Government purchase cards at or below the micro-purchase threshold.

**10. Foreign Items (list items by country of origin):**

Not Applicable

**11a. Time of Delivery: (Contractor insert number of days.)**

As negotiated between tiag and ordering customer.

**11b. Expedited Delivery:**

As negotiated between tiag and ordering customer.

**11c. Overnight and 2-day delivery:**

As negotiated between tiag and ordering customer.

**11d. Urgent Requirements:**

When the Federal Supply Schedule contract delivery period does not meet the bona fide urgent requirements of an ordering activity, ordering activities are encouraged, if time permits, to contact the Contractor for the purpose of obtaining accelerated delivery. The contractor shall reply to the inquiry within 3 workdays after receipt. (Telephonic replies shall be confirmed by the Contractor in writing). If the Contractor offers an accelerated delivery time acceptable to the ordering activity, and order(s) placed pursuant to the agreed upon accelerated delivery time frame shall be delivered within this shorter delivery time and in accordance with all other terms and conditions of the contract.

**12. F.O.B. point(s):**

Destination

**13a. Ordering address(es):**

tiag  
 11911 Freedom Drive, Ste. 1180

Reston, VA 20190

**13b. Ordering procedures:**

For supplies and services, the ordering procedures, information on Blanket Purchase Agreements (BPA's) are found in Federal Acquisition Regulation (FAR) 8.405-3.

**14. Payment address(es).**

tiag  
11911 Freedom Drive. Ste. 1180  
Reston, VA 20190

**15. Warranty provision:**

Not Applicable

**16. Export packing charges, if applicable:**

Not Applicable

**17. Terms and conditions of Government purchase card acceptance (any thresholds above the micro-purchase level):**

Not Applicable

**18. Terms and conditions of rental, maintenance, and repair (if applicable).**

Not Applicable

**19. Terms and conditions of installation (if applicable):**

Not Applicable

**20. Terms and conditions of repair parts indicating date of parts price lists and any discounts from list prices (if applicable).**

Not Applicable

**20a. Terms and conditions for any other services (if applicable).**

Not Applicable

**21. List of service and distribution points (if applicable).**

Not Applicable

**22. List of participating dealers (if applicable).**

Not Applicable

**23. Preventive maintenance (if applicable).**

Not Applicable

**24a. Special attributes such as environmental attributes (e.g., recycled content, energy efficiency, and/or reduced pollutants).**

Not Applicable

**24b. Section 508 compliance for EIT:**

The EIT standards can be found at:  
[www.Section508.gov/](http://www.Section508.gov/).

**25. Data Universal Number System (DUNS) number.**

065245750

**26. Notification regarding registration in System for Award Management (SAM) database.**

Contractor has an Active Registration in the SAM database.

## Exhibit A: Labor Category Rates

SIN	Labor Category Title	June 2019 - 2020	June 2020 - 2021	June 2021 - 2022	June 2022 - 2023
ANCILLARY	Help Desk Support Services Specialist**	\$63.94	\$65.41	\$66.91	\$68.45
ANCILLARY	Technical Writer/Trainer**	\$68.13	\$69.70	\$71.30	\$72.94

SCLS MATRIX		
SCLS Eligible Contract Labor Category	SCLS Eligible Contract Labor Category	WD Number
Help Desk Support Services Specialist	01020 - Administrative Assistant	2015-4281 R. 12
Technical Writer/Trainer	30461 - Technical Writer I	2015-4281 R. 12
<p>The Service Contract Labor Standards, formerly the Service Contract Act (SCA), apply to this contract and it includes SCLS applicable labor categories. Labor categories and fixed price services marked with a (**) in this pricelist are based on the U.S. Department of Labor Wage Determination Number(s) identified in the SCLS/SCA matrix. The prices awarded are in line with the geographic scope of the contract (i.e., nationwide).</p>		

SIN	Labor Category Title	June 2019 - 2020	June 2020 - 2021	June 2021 - 2022	June 2022 - 2023
518210C	Cloud Technical Lead	\$134.52	\$137.61	\$140.78	\$144.02
518210C	Cloud Front End Developer	\$86.10	\$88.08	\$90.10	\$92.18
518210C	Cloud Admin	\$108.71	\$111.21	\$113.77	\$116.38
518210C	Cloud Behavioral Health SME	\$184.24	\$188.47	\$192.81	\$197.24
518210C	Cloud Data Architect	\$117.98	\$120.70	\$123.47	\$126.31
518210C	Cloud Natural Language Consultant	\$160.62	\$164.32	\$168.10	\$171.96
518210C	Cloud Knowledge Engineer	\$135.12	\$138.22	\$141.40	\$144.65
518210C	Cloud Relevancy/Search Engineer	\$105.01	\$107.43	\$109.90	\$112.43
518210C	Cloud Clinical Psychologist	\$109.41	\$111.92	\$114.50	\$117.13
518210C	Cloud Data Scientist	\$118.81	\$121.55	\$124.34	\$127.20
518210C	Cloud National Language Processing (NLP) Data Scientist SME	\$184.24	\$188.47	\$192.81	\$197.24
518210C	Cloud Business Analyst - IT	\$81.21	\$83.08	\$84.99	\$86.94
518210C	Cloud Info Security Manager	\$181.28	\$185.44	\$189.71	\$194.07
518210C	Cloud Business Analyst Stakeholder	\$81.21	\$83.08	\$84.99	\$86.94
518210C	Cloud UI/UX Specialist	\$82.58	\$84.48	\$86.42	\$88.41
518210C	Cloud Engineering Subject Matter Specialist	\$115.01	\$117.66	\$120.36	\$123.13
518210C	Cloud Software Systems Engineer (Project Manager)	\$115.46	\$118.11	\$120.83	\$123.61

SIN	Labor Category Title	June 2019 - 2020	June 2020 - 2021	June 2021 - 2022	June 2022 - 2023
54151HACS	Cybersecurity Mid-Level Help Desk	\$49.97	\$51.12	\$52.30	\$54.73

SIN	Labor Category Title	June 2019 - 2020	June 2020 - 2021	June 2021 - 2022	June 2022 - 2023
54151HACS	Cybersecurity Mid-Level Application Developer	\$93.61	\$95.76	\$97.96	\$100.22
54151HACS	Cybersecurity Mid-Level Information Assurance	\$91.76	\$93.87	\$96.03	\$98.24
54151HACS	Cybersecurity Mid-Level Sharepoint Developer	\$93.61	\$95.76	\$97.96	\$100.22
54151HACS	Cybersecurity Mid-Level SQL Server Database Administrator	\$98.44	\$100.70	\$103.02	\$105.39
54151HACS	Cybersecurity Mid-Level System Administrator	\$93.55	\$95.70	\$97.90	\$100.15
54151HACS	Cybersecurity Sr. Information Systems Security Officer (ISSO)	\$113.20	\$115.81	\$118.47	\$121.20
54151HACS	Cybersecurity Sr. Oracle Administrator	\$112.05	\$114.63	\$117.26	\$119.96
54151HACS	Cybersecurity Sr. Sharepoint Administrator	\$112.23	\$114.81	\$117.45	\$120.15
54151HACS	Cybersecurity Sr. Sharepoint Developer	\$98.10	\$100.36	\$102.67	\$105.03
54151HACS	Cybersecurity Sr. System Administrator	\$99.67	\$101.96	\$104.31	\$106.70
54151HACS	Cybersecurity PHP Developer	\$98.22	\$100.48	\$102.79	\$105.16
54151HACS	Cybersecurity Database Administrator	\$91.09	\$93.18	\$95.33	\$97.52
54151HACS	Cybersecurity Web Application Programmer/Sr. .NET Developer	\$98.22	\$100.48	\$102.79	\$105.16
54151HACS	Cybersecurity UI/UX Designer	\$98.22	\$100.48	\$102.79	\$105.16
54151HACS	Cybersecurity Systems Administrator (UNIX)	\$111.22	\$113.78	\$116.40	\$119.07
54151HACS	Cybersecurity Sr. Java Developer	\$111.22	\$113.78	\$116.40	\$119.07
54151HACS	Cybersecurity Sakai Java Developer	\$98.22	\$100.48	\$102.79	\$105.16
54151HACS	Cybersecurity Java Developer	\$111.22	\$113.78	\$116.40	\$119.07
54151HACS	Cybersecurity System Administrator	\$89.03	\$91.08	\$93.18	\$95.32
54151HACS	Cybersecurity LINAC Systems Administrator	\$89.03	\$91.08	\$93.18	\$95.32
54151HACS	Cybersecurity Technician	\$92.36	\$94.48	\$96.65	\$98.88
54151HACS	Cybersecurity Local Area Network (LAN) Engineer/Technician	\$98.22	\$100.48	\$102.79	\$105.16
54151HACS	Cybersecurity Network Technician	\$48.67	\$49.79	\$50.94	\$52.11
54151HACS	Cybersecurity Microservice Engineer	\$98.22	\$100.48	\$102.79	\$105.16
54151HACS	Cybersecurity G Suite/Serverless Developer	\$89.03	\$91.08	\$93.18	\$95.32
54151HACS	Cybersecurity Asset Manager, Sr.	\$71.88	\$73.54	\$75.23	\$76.96
54151HACS	Cybersecurity Assistant Contract Technical Representative, Jr.	\$78.40	\$80.20	\$82.05	\$83.93
54151HACS	Cybersecurity Assistant Contract Technical Representative, Sr.	\$87.98	\$90.00	\$92.07	\$94.19
54151HACS	Cybersecurity AV/VTC Lead, Sr.	\$77.11	\$78.88	\$80.70	\$82.56
54151HACS	Cybersecurity Business Process Specialist, Jr.	\$88.20	\$90.23	\$92.31	\$94.43

SIN	Labor Category Title	June 2019 - 2020	June 2020 - 2021	June 2021 - 2022	June 2022 - 2023
54151HACS	Cybersecurity Configuration Manager, Sr.	\$105.71	\$108.14	\$110.63	\$113.17
54151HACS	Cybersecurity Database Analyst	\$86.96	\$88.96	\$91.01	\$93.10
54151HACS	Cybersecurity Enterprise Architect	\$159.54	\$163.21	\$166.97	\$170.81
54151HACS	Cybersecurity Help Desk Manager, Sr.	\$76.11	\$77.87	\$79.66	\$81.49
54151HACS	Cybersecurity Information Assurance Lead, Sr.	\$133.02	\$136.08	\$139.21	\$142.42
54151HACS	Cybersecurity IT Functional SME, Sr.	\$108.77	\$111.27	\$113.83	\$116.45
54151HACS	Cybersecurity Network Security Engineer, Jr.	\$104.12	\$106.51	\$108.96	\$111.47
54151HACS	Cybersecurity Network Security Engineer, Sr.	\$110.40	\$112.94	\$115.54	\$118.19
54151HACS	Cybersecurity Network Systems Engineer, Int.	\$94.74	\$96.92	\$99.15	\$101.43
54151HACS	Cybersecurity Network Systems Engineer, Jr.	\$83.36	\$85.28	\$87.24	\$89.25
54151HACS	Cybersecurity Network Systems Engineer, Sr	\$138.86	\$142.06	\$145.32	\$148.67
54151HACS	Cybersecurity Program Manager	\$134.32	\$137.41	\$140.57	\$143.80
54151HACS	Cybersecurity Service Desk Technician, Jr.	\$39.84	\$40.76	\$41.70	\$42.66
54151HACS	Cybersecurity Service Desk Technician, Sr.	\$54.97	\$56.24	\$57.53	\$58.86
54151HACS	Cybersecurity Software Developer, Jr.	\$68.71	\$70.29	\$71.91	\$73.56
54151HACS	Cybersecurity Software Developer, Sr.	\$184.13	\$188.37	\$192.70	\$197.13
54151HACS	Cybersecurity Software Engineer, Int.	\$97.14	\$99.38	\$101.66	\$104.00
54151HACS	Cybersecurity Software Engineer, Sr.	\$118.90	\$121.63	\$124.43	\$127.29
54151HACS	Cybersecurity Software Manager, Sr.	\$95.05	\$97.24	\$99.48	\$101.76
54151HACS	Cybersecurity Web Engineer	\$106.99	\$109.45	\$111.97	\$114.54

SIN	Labor Category Title	June 2019 - 2020	June 2020 - 2021	June 2021 - 2022	June 2022 - 2023
54151S	Advanced Project Manager	\$222.53	\$227.65	\$232.89	\$238.24
54151S	Analyst	\$207.18	\$211.94	\$216.82	\$221.81
54151S	Architect	\$87.02	\$89.02	\$91.07	\$93.16
54151S	Business Systems Analyst	\$77.11	\$78.88	\$80.69	\$82.55
54151S	CA Unicenter Engineer	\$150.87	\$154.34	\$157.89	\$161.52
54151S	Clinical Expert for Information Technology	\$68.79	\$70.37	\$71.99	\$73.64
54151S	Configuration Management Expert	\$161.33	\$165.04	\$168.84	\$172.72
54151S	Database Administrator	\$96.36	\$98.58	\$100.85	\$103.17
54151S	Desktop Management Engineer	\$127.89	\$130.83	\$133.84	\$136.92
54151S	Developer	\$111.74	\$114.31	\$116.94	\$119.63
54151S	Director/Lead Engineer	\$201.93	\$206.58	\$211.33	\$216.19
54151S	Emergency Services Technical Manager	\$156.30	\$159.89	\$163.57	\$167.33

SIN	Labor Category Title	June 2019 - 2020	June 2020 - 2021	June 2021 - 2022	June 2022 - 2023
54151S	Enterprise Management Desktop Administrator	\$111.71	\$114.28	\$116.91	\$119.60
54151S	Enterprise Management Engineer	\$127.89	\$130.83	\$133.84	\$136.92
54151S	Enterprise Management Tech Manager	\$145.95	\$149.31	\$152.75	\$156.26
54151S	Help Desk Specialist	\$84.35	\$86.29	\$88.28	\$90.31
54151S	Information Systems Analyst	\$213.32	\$218.23	\$223.24	\$228.38
54151S	Information Systems Engineer	\$155.09	\$158.66	\$162.31	\$166.04
54151S	Information Systems Executive	\$273.18	\$279.46	\$285.89	\$292.46
54151S	Information Systems Security Specialist	\$150.61	\$154.07	\$157.61	\$161.24
54151S	Information Technology Architect	\$98.77	\$101.04	\$103.36	\$105.74
54151S	Lead Architect	\$233.88	\$239.26	\$244.76	\$250.39
54151S	Network Administrator	\$100.78	\$103.09	\$105.47	\$107.89
54151S	Principal Information Architect	\$392.21	\$401.23	\$410.46	\$419.90
54151S	Principal IT Consultant	\$349.85	\$357.90	\$366.13	\$374.55
54151S	Principal System Architect	\$105.18	\$107.60	\$110.07	\$112.61
54151S	Principal Systems Engineer	\$298.07	\$304.92	\$311.94	\$319.11
54151S	Program Manager	\$180.41	\$184.56	\$188.80	\$193.15
54151S	Project Manager I	\$123.45	\$126.29	\$129.19	\$132.16
54151S	Project Manager II	\$141.20	\$144.44	\$147.77	\$151.16
54151S	QA/QC/Tester	\$86.97	\$88.97	\$91.02	\$93.11
54151S	Requirements Manager	\$122.97	\$125.80	\$128.69	\$131.65
54151S	Senior Health Systems Analyst	\$144.83	\$148.16	\$151.57	\$155.05
54151S	Senior Implementation Subject Matter Expert	\$224.48	\$229.65	\$234.93	\$240.33
54151S	Senior Information Architect	\$298.07	\$304.92	\$311.94	\$319.11
54151S	Senior IT Consultant	\$258.87	\$264.82	\$270.91	\$277.14
54151S	Senior Project Manager	\$149.66	\$153.10	\$156.62	\$160.23
54151S	Senior Security Systems Engineer	\$214.25	\$219.18	\$224.22	\$229.38
54151S	Senior Software Applications Engineer	\$144.47	\$147.79	\$151.19	\$154.67
54151S	Senior Software Asset Management Analyst	\$149.65	\$153.10	\$156.62	\$160.22
54151S	Senior Systems Architect	\$133.32	\$136.38	\$139.52	\$142.73
54151S	Senior Systems Engineer	\$203.95	\$208.64	\$213.44	\$218.35
54151S	Service Desk Administrator	\$111.71	\$114.28	\$116.91	\$119.60
54151S	Service Desk Engineer	\$127.89	\$130.83	\$133.84	\$136.92
54151S	Site Development Engineer	\$87.93	\$89.95	\$92.02	\$94.13
54151S	Software Administrator	\$142.68	\$145.96	\$149.31	\$152.75
54151S	Software Applications Engineer	\$130.44	\$133.44	\$136.51	\$139.65
54151S	Software Developer	\$94.65	\$96.83	\$99.06	\$101.34
54151S	Systems Administrator I	\$68.32	\$69.89	\$71.50	\$73.14

SIN	Labor Category Title	June 2019 - 2020	June 2020 - 2021	June 2021 - 2022	June 2022 - 2023
54151S	Systems Administrator III	\$98.33	\$100.59	\$102.90	\$105.27
54151S	Systems Analyst II	\$114.33	\$116.96	\$119.65	\$122.40
54151S	Systems Engineer III	\$94.83	\$97.02	\$99.25	\$101.53
54151S	Task Manager	\$191.84	\$196.25	\$200.77	\$205.38
54151S	Technology Specialist	\$201.62	\$206.26	\$211.00	\$215.85
54151S	Telecommunications & Network Engineer	\$129.84	\$132.82	\$135.88	\$139.00
54151S	Tester	\$115.38	\$118.03	\$120.75	\$123.53
54151S	VoIP Administrator	\$92.32	\$94.45	\$96.62	\$98.84
54151S	VoIP Engineer	\$108.91	\$111.41	\$113.98	\$116.60
54151S	VoIP Senior Engineer	\$124.68	\$127.54	\$130.48	\$133.48
54151S	VTC Administrator	\$74.22	\$75.92	\$77.67	\$79.45
54151S	VTC Senior Engineer	\$121.89	\$124.69	\$127.56	\$130.49
54151S	VTC Technician	\$86.04	\$88.02	\$90.04	\$92.11

SIN	Labor Category Title	June 2019 - 2020	June 2020 - 2021	June 2021 - 2022	June 2022 - 2023
54151HEAL	Administrative Assistant	\$37.81	\$38.68	\$39.57	\$40.48
54151HEAL	Applications Systems Analyst / Program Manager	\$90.59	\$92.67	\$94.80	\$96.98
54151HEAL	Business Analyst	\$83.54	\$85.46	\$87.42	\$89.43
54151HEAL	Business Process (BP) Consultants	\$122.54	\$125.36	\$128.24	\$131.19
54151HEAL	Business Subject Matter Specialist	\$135.59	\$138.71	\$141.90	\$145.17
54151HEAL	Clinical Expert for Information Technology (Health IT)	\$68.79	\$70.37	\$71.99	\$73.65
54151HEAL	Clinical SME	\$104.60	\$107.01	\$109.47	\$111.99
54151HEAL	Consultant Records Management	\$122.86	\$125.69	\$128.58	\$131.54
54151HEAL	Data Architect	\$111.95	\$114.52	\$117.16	\$119.85
54151HEAL	Engineering Subject Matter Expert	\$133.38	\$136.45	\$139.59	\$142.80
54151HEAL	Help Desk Specialist	\$39.57	\$40.48	\$41.41	\$42.36
54151HEAL	Help Desk Support Services Specialist - Senior	\$46.85	\$47.93	\$49.03	\$50.16
54151HEAL	Information Assurance Engineer Senior	\$109.33	\$111.84	\$114.41	\$117.05
54151HEAL	Information Assurance Network Specialist	\$90.59	\$92.67	\$94.80	\$96.98
54151HEAL	Information Systems Engineer (Health IT)	\$155.09	\$158.65	\$162.30	\$166.03
54151HEAL	Lead Architect (Health IT)	\$233.88	\$239.26	\$244.76	\$250.39
54151HEAL	Leadership Consultant	\$178.63	\$182.74	\$186.94	\$191.24
54151HEAL	Network Engineer - Senior	\$94.75	\$96.93	\$99.16	\$101.44
54151HEAL	PAO Assistant	\$62.21	\$63.64	\$65.11	\$66.60

SIN	Labor Category Title	June 2019 - 2020	June 2020 - 2021	June 2021 - 2022	June 2022 - 2023
54151HEAL	PMO Project Manager	\$62.21	\$63.64	\$65.11	\$66.60
54151HEAL	Program Manager	\$108.89	\$111.39	\$113.96	\$116.58
54151HEAL	Project Manager - Sr.	\$107.65	\$110.13	\$112.66	\$115.25
54151HEAL	Project Manager	\$87.51	\$89.53	\$91.59	\$93.69
54151HEAL	Project Manager Senior	\$131.90	\$134.94	\$138.04	\$141.21
54151HEAL	Research Analyst	\$74.39	\$76.11	\$77.86	\$79.65
54151HEAL	Senior Health Systems Analyst (Health IT)	\$144.83	\$148.16	\$151.56	\$155.05
54151HEAL	Social Media Manager	\$74.39	\$76.11	\$77.86	\$79.65
54151HEAL	Staff Writer	\$62.21	\$63.64	\$65.11	\$66.60
54151HEAL	Systems Engineer (EM)	\$98.92	\$101.19	\$103.52	\$105.90
54151HEAL	Systems Engineer (EM) Administrator	\$88.50	\$90.54	\$92.62	\$94.75
54151HEAL	Task Manager	\$74.39	\$76.11	\$77.86	\$79.65
54151HEAL	Task Manager II	\$140.72	\$143.96	\$147.27	\$150.65
54151HEAL	Technical Writer I	\$66.64	\$68.17	\$69.74	\$71.34
54151HEAL	Technical Writer II	\$71.52	\$73.17	\$74.85	\$76.57
54151HEAL	Training Manager	\$146.35	\$149.72	\$153.16	\$156.69
54151HEAL	Web Content Administrator	\$92.67	\$94.80	\$96.98	\$99.21
54151HEAL	Web Project Manager - Senior	\$108.29	\$110.78	\$113.32	\$115.93
54151HEAL	Web Project Manager	\$111.56	\$114.13	\$116.75	\$119.44

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

**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, 54151S).

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"> <li>● Commercially available cloud computing services</li> <li>● Meets the National Institute for Standards and Technology (NIST) definition of Cloud Computing essential characteristics</li> <li>● Open to all deployment models (private, public, community or hybrid), vendors specify deployment models</li> </ul>	<ol style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>3. Infrastructure as a Service (IaaS): Consumer provisions computing resources. Has control over OS, storage, platform, deployed applications and</li> </ol>

SIN Description	Sub-Categories (1)
	some limited infrastructure configuration, but does not manage the infrastructure.

1 Offerors may optionally select the single sub-category that best fits each cloud service offering, per Service Model Guidance, or select no sub-category if the offering does not fit an existing NIST service model.

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

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	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

#	Description Requirement	Reporting Type	Instructions
			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.
2	Select NIST deployment models for the cloud computing service proposed.	Mandatory	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.
3	Optionally select the most appropriate NIST service model that will be the designated sub-category, or may select no sub-category.	Optional	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.

#### b. 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 these 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(3).

2. Per Federal Information Processing Standards Publication 199 & 200 (FIPS 199, "Standards for Security Categorization of Federal Information and Information Systems") (FIPS 200, "Minimum Security Requirements for Federal Information and Information Systems")

3. MEMORANDUM FOR CHIEF INFORMATION OFFICERS: Security Authorization of Information Systems in Cloud Computing Environments. December 8, 2011.

(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

800-122(4) and OMB memos M-06-16(5) and M-07-16(6). An Ordering Activity will determine what data elements constitute PII according to OMB Policy, NIST Guidance and Ordering Activity policy.

4. NIST SP 800-122, "Guide to Protecting the Confidentiality of Personally Identifiable Information (PII)"

5. OMB memo M-06-16: Protection of Sensitive Agency Information  
<http://www.whitehouse.gov/sites/default/files/omb/memoranda/fy2006/m06-16.pdf>

6. OMB Memo M-07-16: Safeguarding Against and Responding to the Breach of Personally Identifiable Information  
<http://www.whitehouse.gov/sites/default/files/omb/memoranda/fy2007/m07-16.pdf>

#### 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\(7\)](http://csrc.nist.gov/publications/nistpubs/800-145/SP800-145.pdf).

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.

[7 http://csrc.nist.gov/publications/nistpubs/800-145/SP800-145.pdf](http://csrc.nist.gov/publications/nistpubs/800-145/SP800-145.pdf)

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

<b>GENERAL GUIDANCE</b>
-------------------------

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
On-demand self-service	<ul style="list-style-type: none"> <li>● Ordering activities can directly provision services without requiring Contractor intervention.</li> <li>● This characteristic is typically implemented via a service console or programming interface for provisioning</li> </ul>	<p>Government procurement guidance varies on how to implement on-demand provisioning at this time. 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"> <li>● Ordering activities must specify their procurement approach and requirements for on-demand service</li> <li>● Contractors must propose how they intend to meet the approach</li> <li>● Contractors must certify that on-demand self-service is technically available for their service should procurement guidance become available.</li> <li>● Broad network access must be available without significant qualification and in relation to the deployment model and security domain of the service</li> </ul>
Broad Network Access	<ul style="list-style-type: none"> <li>● Ordering activities are able to access services over standard agency networks</li> <li>● Service can be accessed and provisioned using standard devices such as browsers, tablets and mobile phones</li> </ul>	<ul style="list-style-type: none"> <li>● 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.</li> <li>● The cloud service must draw from a pool of resources and provide an automated means for the Ordering Activity to dynamically allocate them.</li> </ul>
Resource Pooling	<ul style="list-style-type: none"> <li>● Pooling distinguishes cloud services from simple offsite hosting.</li> <li>● Ordering activities draw resources from a common pool maintained by the Contractor</li> </ul>	<ul style="list-style-type: none"> <li>● Manual allocation, e.g. manual operations at a physical server farm where Contractor staff configure servers in response to Ordering Activity requests, does not meet this requirement</li> </ul>

Characteristic	Capability	Guidance
Rapid Elasticity	<ul style="list-style-type: none"> <li>Resources may have general characteristics such as regional location</li> <li>Rapid provisioning and de-provisioning commensurate with demand</li> </ul>	<ul style="list-style-type: none"> <li>Similar concerns apply to software and platform models; automated provisioning from a pool is required</li> <li>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.</li> <li>Rapid elasticity is a specific demand-driven case of self-service</li> <li>'Rapid' should be understood as measured in minutes and hours, not days or weeks.</li> <li>Elastic capabilities by manual request, e.g. via a console operation or programming interface call, are required.</li> <li>Automated elasticity which is driven dynamically by system load, etc. is optional. Contractors must specify whether automated demand-driven elasticity is available and the general mechanisms that drive the capability.</li> <li>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.</li> </ul>
Measured Service	<ul style="list-style-type: none"> <li>Measured service should be understood as a reporting requirement that enables an Ordering Activity to control their use in cooperation with self service</li> </ul>	<ul style="list-style-type: none"> <li>Contractors must specify whether automated demand-driven elasticity is available and the general mechanisms that drive the capability.</li> <li>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.</li> <li>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</li> <li>Contractors must specify that measured service is available and the general sort of metrics and mechanisms available</li> <li>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</li> </ul>

Characteristic	Capability	Guidance
		and will not be eligible for inclusion in this SIN.

**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 resources 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.

**b. 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"> <li>● IaaS services are typically consumed by system or device managers who would configure physical hardware in a non-cloud setting</li> <li>● The principal customer interaction with an IaaS service is provisioning then configuration, equivalent to procuring and then configuring a physical device.</li> </ul> <p>Examples of IaaS services include virtual machines, object storage, disk block storage, network routers and firewalls, software defined networks. 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"> <li>● A complete platform can deploy an entire application. Complete platforms can be proprietary or open source</li> <li>● Partial platforms can deploy a component of an application which combined with other components make up the entire deployment</li> <li>● 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</li> <li>● 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.</li> <li>● A limited range of configuration options for the platform service may be available.</li> </ul> <p>Examples of complete PaaS services include:</p> <ul style="list-style-type: none"> <li>● A Linux/Apache/MySQL/PHP (LAMP) platform ready to deploy a customer PHP application,</li> <li>● a Windows .Net platform ready to deploy a .Net application,</li> <li>● A custom complete platform ready to develop and deploy an customer application in a proprietary language</li> <li>● A multiple capability platform ready to deploy an arbitrary customer application on a range of underlying software services.</li> </ul> <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. 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"> <li>● A database service ready to deploy a customer's tables, views and procedures,</li> <li>● A queuing service ready to deploy a customer's message definitions</li> <li>● A security service ready to deploy a customer's constraints and target applications for continuous monitoring</li> </ul> <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>

Service Model	Guidance
Software as a Service (SaaS)	<p>Note that both the partial and complete PaaS examples all have two things in common:</p> <ul style="list-style-type: none"> <li>• They are software services, which offer significant core functionality out of the box</li> <li>• They must be configured with customer data and structures to deliver results</li> </ul> <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> <p>Select a SaaS model for service based equivalents of software applications.</p> <ul style="list-style-type: none"> <li>• SaaS services are typically consumed by business or subject-matter staff who would interact directly with the application in a non-cloud setting</li> <li>• The principal customer interaction with a SaaS service is actual operation and consumption of the application services the SaaS service provides.</li> </ul> <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. Typically only the Contractor would be permitted to configure aspects of the software for all users. 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 directly 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>

c. 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

Deployment Model	Guidance
Public Cloud	located as required, but access is strictly defined by membership in the owning organization. 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 54151S “Information Technology Professional Services may remain under SIN 54151S, 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.

#### l. 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

## CLOUD LABOR CATEGORY DESCRIPTIONS - 518210C

### CLOUD TECHNICAL LEAD

**Education:** Bachelor's Degree in Computer Science, Engineering or similar technical Degree.

**Experience:** Five (5) years of professional/technical experience

**Duties/Responsibilities:** A Technical Lead must have experience in management of individual software modules or other system components. Must have experience in coordinating technical requirements provided by managers with team of developers. A Technical Lead must have experience in preparing system document and tracking bugs or other tasks to resolution while adhering to a published schedule.

### CLOUD FRONT END DEVELOPER

**Education:** Bachelor's Degree in Computer Science, Engineering or similar technical Degree.

**Experience:** Two (2) years of professional/technical experience

**Duties/Responsibilities:** Responsible for user experience design and visual design. Construct XHTML, CSS and JavaScript pages and templates from art files; construct XHTML/CSS pages and templates using table-less layouts. Create and modify graphic elements of Web pages and customer-provided PDF files. Work collaboratively with, and provide input to, copywriters, content managers, designers and the technical team. Based on needs, knowledge of CSS, Sass, HTML, JavaScript (jQuery), Twig, 508 compliance, RDFa, XHTML/CSS, and others if appropriate.

### CLOUD ADMIN

**Education:** Bachelor's Degree in Computer Science, Engineering or similar technical Degree.

**Experience:** Four (4) years of professional/technical experience

**Duties/Responsibilities:** Works in conjunction with Cloud Architect in meeting with customer to determine project requirements. Provides full-range of cloud administration, configuration, and maintenance management. Oversees the creation and/or maintenance of cloud accounts. Modifies existing cloud accounts based on the evolution of the customer requirements. Keeps the customer and Aquilent management informed of project status on a regular basis.

### CLOUD BEHAVIORAL HEALTH SME

**Education:** Master's degree in psychology, e.g., industrial, experimental, educational, human factors or a related discipline

**Experience:** Four (4) years of professional/technical experience in an applied work setting, demonstrated strong research and analytical skills, an ability to observe and record behaviors, and teamwork skills.

**Duties/Responsibilities:** Performs research of human behavior patterns, analyzing data and interpreting patterns to identify and predict future behaviors. Develops and conducts surveys and interprets survey results. Creates tools for assessing the effectiveness of training objectives and creates techniques for enhancing learning retention and customizing presentation methods. Assists in policy development, business strategy planning, and creation of change management processes. Attends meetings, facilitates group briefings, and consults and advises in program planning, seminars, courses and workshops.

### CLOUD DATA ARCHITECT

**Education:** Bachelor's Degree in Computer Science, Engineering or similar technical Degree.

**Experience:** Five (5) years of professional/technical experience

**Duties/Responsibilities:** Provide insight into the changing database storage and utilization requirements for the company and offer suggestions for solutions. Analyze database implementation methods to make sure they are in line with company policies and any external regulations that may apply. Create data monitoring models for each product and work with our marketing team to create models ahead of new releases. Develop database design and architecture documentation for the management and executive teams. Help maintain the integrity and security of the company database.

### CLOUD NATURAL LANGUAGE CONSULTANT

**Education:** Bachelor's degree in Computer Science, Computation Linguistics or a related field

**Experience:** Six (6) years of professional/technical experience in NLP methods for information extraction, topic modeling, parsing, and relationship extraction. Experience with knowledge databases and language ontologies

**Duties/Responsibilities:** Design and develop clinical NLP methods that ingest large unstructured data sets, separate signal from noise, and provide insights that directly improve our analytics platform. Interrogate analytical results to resolve algorithmic success, robustness and validity. Automate complex decision models and build data pipelines for ML and NLP leveraging unstructured voice and text data and interpreting model results for end users. A passion to teach and train other data scientists to expand and develop a center of excellence. Analyze and model structured and unstructured data using advanced statistical methods and create structured data from unstructured conversational voice

### **CLOUD KNOWLEDGE ENGINEER**

**Education:** Bachelor's Degree in Computer Science, Engineering or similar technical Degree.

**Experience:** Five (5) years of professional/technical experience

**Duties/Responsibilities:** Provides analysis and application of knowledge management (KM), information process improvement, and total quality management (TQM) tools and applications in support of IT projects such as software development and software requirements definition. Designs and develops KM solutions to capture, develop, and improve the use of the client organization's knowledge. Provides expertise in one or more fields such as quality, training, benchmarking, knowledge management, process re-engineering, and performance assessment and measurement. Provides innovative strategies and expertise in knowledge management, readiness review, organization methodology and tools and overall KM direction. Employs needs assessment and results implementation as facilitation tools with the client. Collaborates with team to provide a robust, enterprise-wide learning and client supportive IT solution.

### **CLOUD RELEVANCY/SEARCH ENGINEER**

**Education:** Bachelor's Degree in Computer Science, Engineering or similar technical Degree.

**Experience:** Four (4) years of professional/technical experience

**Duties/Responsibilities:** Help design, develop, and support new "intelligence" features on a world-class search service that serves millions of requests daily on a diverse corpus of data including structured, unstructured and social feeds. Conduct extensive analysis/study of usage metrics and patterns to identify opportunities to improve relevancy of search. Actively participate in product and feature designs with your scrum team, working closely with product owners to define functional and technical requirements. Write clean, testable, readable and maintainable code that scales and performs. Collaborate with colleagues throughout the organization. Perform code and design reviews. Take ownership of your code and features, from design through deployment and support.

### **CLOUD CLINICAL PSYCHOLOGIST**

**Education:** Master's Degree in Computer Science, Engineering or similar technical Degree.

**Experience:** Four (4) years of professional/technical experience

**Duties/Responsibilities:** Provide psychological assessment and consultation services in your assigned area. Diagnose psychological, behavioral and emotional disorders in accordance with diagnostic criteria and develop a treatment plan accordingly. Provide therapy to groups and individuals using various evidence-based modalities. Monitor client progress through regular meetings and checkups. Maintain an open line of communication with care providers, patients and their family members in order to efficiently address emergencies. Conduct research teach classes and attend industry conferences to remain current on the latest treatments.

### **CLOUD DATA SCIENTIST**

**Education:** Bachelor's Degree in Computer Science, Engineering or similar technical Degree.

**Experience:** Five (5) years of professional/technical experience

**Duties/Responsibilities:** Works alongside colleagues to leverage the power of cognitive computing to disrupt traditional business decision making. The NLP Data Scientist SME will utilize their experience in text mining and natural language processing to develop a new generation of real-time decision support capabilities. A passion to teach and train other data scientists to expand and develop a center of excellence. Analyze and model structured and unstructured data using advanced statistical methods and create structured data from unstructured conversational voice

### **CLOUD NATIONAL LANGUAGE PROCESSING (NLP) DATA SCIENTIST SME**

Education: Bachelor's Degree in Computer Science, Engineering or similar technical Degree.

Experience: Six (6) years of professional/technical experience

Duties/Responsibilities: Build a data extraction and analytics team. Drive the product roadmap with the responsibility of machine learning algorithms, modeling, and productization. Manage various data/document sources and pipelines for the efficient application of extraction technologies to support strategic decision making. Deep understanding of a wide variety of ML techniques and algorithms: Statistical NLP, Language Modeling, Scalable Time Series Modeling (Prophet), supervised regression and classification-based models and unsupervised learners. Implement new analysis algorithms and potentially develop software for automated generation of NLG. Collaborate with other team members to ensure that data is acquired, processed, and securely stored according to appropriate procedures

### **CLOUD BUSINESS ANALYST - IT**

Education: Bachelor's Degree in Computer Science, Engineering or similar technical Degree.

Experience: Two (2) years of professional/technical experience

Duties/Responsibilities: Provides leadership, expertise and guidance on strategic business change projects. Provides business analysis on projects including engagement and stakeholder management. Leads business change and defines business requirements and processes on projects. The responsibilities listed are a general overview of the position and additional duties may be assigned.

### **CLOUD INFO SECURITY MANAGER**

Education: Bachelor's Degree in Computer Science, Engineering or similar technical Degree.

Experience: Six (6) years of professional/technical experience

Duties/Responsibilities: Responsible for protecting information and information systems from unauthorized access, use, disclosure, disruption, modification, perusal, inspection, recording and destruction. Duties may include managing and enforcing of security strategies and policies within established guidelines. Areas of responsibilities include, but are not limited to, IT Security Strategy, Cyber Security, and Compliance and Risk Management which includes IT Security and Compliance Teams.

### **CLOUD BUSINESS ANALYST STAKEHOLDER**

Education: Bachelor's Degree in Computer Science, Engineering or similar technical Degree.

Experience: Two (2) years of professional/technical experience

Duties/Responsibilities: Work as a part of a Strategic Planning Unit to assist with, facilitate or manage business process engineering efforts. Assist the client in mapping functions to organizations, analyzing existing processes for potential improvements, and developing written process analysis documents and workflows. Interact regularly with the various levels of customer management for the purpose of supporting the development of process improvement efforts. Conducting and preparing written research to support and explain business process recommendations. Perform and document data and process analysis. Facilitate planning sessions with senior government personnel

### **CLOUD UI/UX SPECIALIST**

Education: Bachelor's Degree in Computer Science, Engineering or similar technical Degree.

Experience: Two (2) years of professional/technical experience

Duties/Responsibilities: Understands, from a user-centered design (UCD) perspective, the customer's and end-users' creative requirements and IT project-specific style guidelines. Works with customer to analyze and understand their business and end-user requirements. Provides workflow analysis, content hierarchies, user interface requirements, site maps, wireframe diagrams, and prototypes. Produces high-level documents articulating how a proposed architecture addresses strategic, business, user, and functional requirements. Supports usability studies. Web professional with understanding of visual design, user behaviors and Front End development. Responsible for content planning, wireframing, prototyping, personas and usability testing for applications and websites.

### **CLOUD ENGINEERING SUBJECT MATTER SPECIALIST**

Education: Bachelor's Degree in Computer Science, Engineering or similar technical Degree.

Experience: Four (4) years of professional/technical experience

**Duties/Responsibilities:** Provides technical knowledge and analysis of highly specialized applications and operational environment, high-level functional systems analysis, design, integration, documentation, and implementation advice on exceptionally complex problems that necessitate high-level knowledge of the subject matter for effective implementation. Participates as needed in all phases of software development with emphasis on the planning, analysis, modeling, simulation, testing, integration, documentation and presentation phases.

#### **CLOUD SOFTWARE SYSTEMS ENGINEER (PROJECT MANAGER)**

**Education:** Bachelor's Degree in Computer Science, Engineering or similar technical Degree.

**Experience:** Four (4) years of professional/technical experience

**Duties/Responsibilities:** Formulates/defines specifications for complex operating software programming applications or modifies/maintains complex existing applications using engineering releases and utilities from the manufacturer. Designs, codes, tests, debugs, and documents those programs. Provides overall operating system, such as sophisticated file maintenance routines, large telecommunications networks, computer accounting, and advanced mathematical/scientific software packages. Assists all phases of software systems programming applications. Evaluates new and existing software products.

## TERMS AND CONDITIONS APPLICABLE TO HIGHLY ADAPTIVE CYBERSECURITY SERVICES (HACS) (SPECIAL ITEM NUMBERS 54151HACS)

Vendor suitability for offering services through the Highly Adaptive Cybersecurity Services (HACS) SIN must be in accordance with the following laws and standards when applicable to the specific task orders, including but not limited to:

- Federal Acquisition Regulation (FAR) Part 52.204-21
- OMB Memorandum M-17-12 - Preparing for and Responding to a Breach of Personally Identifiable Information (PII)
- OMB Memorandum M- 19-03 - Strengthening the Cybersecurity of Federal Agencies by enhancing the High Value Asset Program
- 2017 Report to the President on Federal IT Modernization
- The Cybersecurity National Action Plan (CNAP)
- NIST SP 800-14 - Generally Accepted Principles and Practices for Securing Information Technology Systems
- NIST SP 800-27A - Engineering Principles for Information Technology Security (A Baseline for Achieving Security)
- NIST SP 800-30 - Guide for Conducting Risk Assessments
- NIST SP 800-35 - Guide to Information Technology Security Services
- NIST SP 800-37 - Risk Management Framework for Information Systems and Organizations: A Systems Life Cycle Approach for Security and Privacy
- NIST SP 800-39 - Managing Information Security Risk: Organization, Mission, and Information System View
- NIST SP 800-44 - Guidelines on Securing Public Web Servers
- NIST SP 800-48 - Guide to Securing Legacy IEEE 802.11 Wireless Networks
- NIST SP 800-53 - Security and Privacy Controls for Federal Information Systems and Organizations
- NIST SP 800-61 - Computer Security Incident Handling Guide
- NIST SP 800-64 - Security Considerations in the System Development Life Cycle
- NIST SP 800-82 - Guide to Industrial Control Systems (ICS) Security
- NIST SP 800-86 - Guide to Integrating Forensic Techniques into Incident Response
- NIST SP 800-115 - Technical Guide to Information Security Testing and Assessment
- NIST SP 800-128 - Guide for Security-Focused Configuration Management of Information Systems
- NIST SP 800-137 - Information Security Continuous Monitoring (ISCM) for Federal Information Systems and Organizations
- NIST SP 800-153 - Guidelines for Securing Wireless Local Area Networks (WLANs)
- NIST SP 800-160 - Systems Security Engineering: Considerations for a Multidisciplinary Approach in the Engineering of Trustworthy Secure Systems
- NIST SP 800-171 - Protecting Controlled Unclassified Information in non-federal Information Systems and Organizations

### 1. SCOPE

- a. The labor categories, prices, terms and conditions stated under Special Item Number 132- 45 Highly Adaptive Cybersecurity Services (HACS) apply exclusively to Highly Adaptive Cybersecurity Services within the scope of this Information Technology Schedule.
- b. Services under this SIN are limited to Highly Adaptive Cybersecurity Services only. Software and hardware products are under different Special Item Numbers on IT Schedule 70 (e.g. 132-32, 132-33, 132-8), and may be quoted along with services to provide a total solution.
- c. This SIN provides ordering activities with access to Highly Adaptive Cybersecurity services only.
- d. Highly Adaptive Cybersecurity Services provided under this SIN shall comply with all Cybersecurity certifications and industry standards as applicable pertaining to the type of services as specified by ordering agency.

e. SCOPE:

54151HACS Highly Adaptive Cybersecurity Services (HACS) - SUBJECT TO COOPERATIVE PURCHASING - includes proactive and reactive cybersecurity services that improve the customer's enterprise-level security posture.

The scope of this category encompasses a wide range of fields that include, but are not limited to, Risk Management Framework (RMF) services, information assurance (IA), virus detection, network management, situational awareness and incident response, secure web hosting, and backup and security services.

The seven-step RMF includes preparation, information security categorization; control selection, implementation, and assessment; system and common control authorizations; and continuous monitoring. RMF activities may also include Information Security Continuous Monitoring Assessment (ISCSMA) which evaluate organization-wide ISCM implementations, and also Federal Incident Response Evaluations (FIREs), which assess an organization's incident management functions.

The scope of this category also includes Security Operations Center (SOC) services. The SOC scope includes services such as: 24x7x365 monitoring and analysis, traffic analysis, incident response and coordination, penetration testing, anti-virus management, intrusion detection and prevention, and information sharing.

HACS vendors are able to identify and protect a customer's information resources, detect and respond to cybersecurity events or incidents, and recover capabilities or services impaired by any incidents that emerge.

Sub-Categories - (not all vendors have been placed within the following subcategories. To view a complete list of vendors, click on the SIN)

- High Value Asset (HVA) Assessments include *Risk and Vulnerability Assessment (RVA)* which assesses threats and vulnerabilities, determines deviations from acceptable configurations, enterprise or local policy, assesses the level of risk, and develops and/or recommends appropriate mitigation countermeasures in operational and non-operational situations. The services offered in the RVA sub-category include Network Mapping, Vulnerability Scanning, Phishing Assessment, Wireless Assessment, Web Application Assessment, Operating System Security Assessment (OSSA), Database Assessment, and Penetration Testing. *Security Architecture Review (SAR)* evaluates a subset of the agency's HVA security posture to determine whether the agency has properly architected its cybersecurity solutions and ensures that agency leadership fully understands the risks inherent in the implemented cybersecurity solution. The SAR process utilizes in-person interviews, documentation reviews, and leading practice evaluations of the HVA environment and supporting systems. SAR provides a holistic analysis of how an HVA's individual security components integrate and operate, including how data is protected during operations. *Systems Security Engineering (SSE)* identifies security vulnerabilities and minimizes or contains risks associated with these

vulnerabilities spanning the Systems Development Life Cycle. SSE focuses on, but is not limited to the following security areas: perimeter security, network security, endpoint security, application security, physical security, and data security.

- Risk and Vulnerability Assessment (RVA) assesses threats and vulnerabilities, determines deviations from acceptable configurations, enterprise or local policy, assesses the level of risk, and develops and/or recommends appropriate mitigation countermeasures in operational and non-operational situations. The services offered in the RVA sub-category include Network Mapping, Vulnerability Scanning, Phishing Assessment, Wireless Assessment, Web Application Assessment, Operating System Security Assessment (OSSA), Database Assessment, and Penetration Testing.
- Cyber Hunt activities respond to crises or urgent situations within the pertinent domain to mitigate immediate and potential threats. Cyber Hunts start with the premise that threat actors known to target some organizations in a specific industry or with specific systems are likely to also target other organizations in the same industry or with the same systems.
- Incident Response services help organizations impacted by a cybersecurity compromise determine the extent of the incident, remove the adversary from their systems, and restore their networks to a more secure state.
- Penetration Testing is security testing in which assessors mimic real-world attacks to identify methods for circumventing the security features of an application, system, or network. f. 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. ORDER

a. 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 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.

## 3. PERFORMANCE OF SERVICES

a. The Contractor shall commence performance of services on the date agreed to by the Contractor and the ordering activity. All Contracts will be fully funded.

b. The Contractor agrees to render services 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 Highly Adaptive Cybersecurity 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.

## 4. INSPECTION OF SERVICES

Inspection of services is in accordance with 552.212-4 - CONTRACT TERMS AND CONDITIONS-COMMERCIAL ITEMS (Jan 2017) & (ALTERNATE I-Jan 2017) for Time-and-Materials and Labor-Hour orders placed under this contract.

#### 5. 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.

#### 6. RESPONSIBILITIES OF THE ORDERING ACTIVITY

Subject to the ordering activity security regulations, the ordering activity shall permit Contractor access to all facilities necessary to perform the requisite Highly Adaptive Cybersecurity Services.

#### 7. INDEPENDENT CONTRACTOR

All Highly Adaptive Cybersecurity 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.

#### 8. 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.

#### 9. INVOICES

The Contractor, upon completion of the work ordered, shall submit invoices for Highly Adaptive Cybersecurity 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.

#### 10. RESUMES

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

## 11. APPROVAL OF SUBCONTRACTS

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

## 12. DESCRIPTION OF HIGHLY ADAPTIVE CYBERSECURITY SERVICES AND PRICING

a. The Contractor shall provide a description of each type of Highly Adaptive Cybersecurity Service offered under Special Item Number 54151HACS for Highly Adaptive Cybersecurity Services 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.

b. Pricing for all Highly Adaptive Cybersecurity 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: Computer Network Defense Analysis

Description: Uses defensive measures and information collected from a variety of sources to identify, analyze, and report events that occur or might occur within the network in order to protect information, information systems, and networks from threats.

Professionals involved in this specialty perform the following tasks:

- Provide timely detection, identification, and alerting of possible attacks/intrusions, anomalous activities, and misuse activities and distinguish these incidents and events from benign activities
- Provide daily summary reports of network events and activity relevant to Computer Network Defense practices
- Monitor external data sources (e.g., Computer Network Defense vendor sites, Computer Emergency Response Teams, SANS, Security Focus) to maintain currency of Computer Network Defense threat condition and determine which security issues may have an impact on the enterprise.

Knowledge, Skills and Abilities: Knowledge of applicable laws (e.g., Electronic Communications Privacy Act, Foreign Intelligence Surveillance Act, Protect America Act, search and seizure laws, civil liberties and privacy laws, etc.), statutes (e.g., in Titles 10, 18, 32, 50 in U.S. Code), Presidential Directives, executive branch guidelines, and/or administrative/criminal legal guidelines and procedures relevant to work performed

Minimum Experience: 5 Years

Minimum Education Requirements: a bachelor's of science degree with a concentration in computer science, cybersecurity services, management information systems (MIS), engineering or information science is essential.

Highly Desirable: Offensive Security Certified Professional (OSCP) or commercial Cybersecurity advanced certification(s).

## CYBERSECURITY LABOR CATEGORY DESCRIPTIONS - 54151HACS

### CYBERSECURITY MID-LEVEL HELP DESK

Education: Associate degree in Computer Science, Engineering or similar technical Degree.

Experience: Two (2) years of professional/technical experience

Duties/Responsibilities: The Cybersecurity Mid-Level Help Desk will operate a level-one, consolidated customer service desk to answer IT/IM service calls for approximately 2,400+ end users. Operates a call center that conducts preliminary assessment of a call and opens/dispatches work orders to other sections of the Agency. Responsible for 19,000+ Help Desk Tickets of which 1,600+ of the tickets require hands-on to repair. The Mid-Level Help Desk is trained in preliminary diagnostics and resolution of common user problems. The Mid-Level Help Desk will provide preliminary screening of incidents and requests and forward those issues that cannot be resolved by the service desk to the appropriate section, team, or contractor for action.

#### **CYBERSECURITY MID-LEVEL APPLICATION DEVELOPER**

Education: Bachelor's degree in Computer Science, Engineering or similar technical Degree.

Experience: Three (3) years of professional/technical experience

Duties/Responsibilities: The Cybersecurity Mid-Level Application Developer performs basic tasks ranging from setting user permissions, to developing applications in various program languages such as C#, .net ASP.net, to migrating applications to new operating environments.

#### **CYBERSECURITY MID-LEVEL INFORMATION ASSURANCE**

Education: Bachelor's degree in Computer Science, Engineering or similar technical Degree.

Experience: Three (3) years of professional/technical experience

Duties/Responsibilities: The Cybersecurity Mid-Level Information Assurance will be a focal point for supporting the effort to develop and implement a cyber security environment located at a client site and then be an integral part of leveraging the cybersecurity environment to support life-cycle efforts in maintaining Test Systems moving forward. The current environment includes a variety of operating systems and different security postures spanning several different customers.

#### **CYBERSECURITY MID-LEVEL SHAREPOINT DEVELOPER**

Education: Bachelor's degree in Computer Science, Engineering or similar technical Degree.

Experience: Three (3) years of professional/technical experience

Duties/Responsibilities: The Cybersecurity Mid-Level Sharepoint Developer performs basic tasks ranging from setting user permissions to designing and developing applications in various program languages such as C#, .net, and ASP.NET.

#### **CYBERSECURITY MID-LEVEL SQL SERVER DATABASE ADMINISTRATOR**

Education: Bachelor's degree in Computer Science, Engineering or similar technical Degree.

Experience: Five (5) years of professional/technical experience

Duties/Responsibilities: Is responsible for supporting database infrastructure design, maintenance, automation, optimization and implementation of new and existing applications in development and testing within a SQL environment.

#### **CYBERSECURITY MID-LEVEL SYSTEM ADMINISTRATOR**

Education: Bachelor's degree in Computer Science, Engineering or similar technical Degree.

Experience: Three (3) years of professional/technical experience

Duties/Responsibilities: The Cybersecurity Mid-Level System Administrator performs basic tasks ranging from Perform SQL log checks to SharePoint PowerShell Command lets and object modeling.

#### **CYBERSECURITY SR. INFORMATION SYSTEMS SECURITY OFFICER (ISSO)**

Education: Bachelor's degree in Computer Science, Engineering or similar technical Degree.

Experience: Three (3) years of professional/technical experience

Duties/Responsibilities: The Cybersecurity SR. ISSO provides technical expertise with regards to maintaining and improving the government-client Risk Management Framework (RMF) and provide tactical production operations

support and Certification and Accreditation (C&A) services. The ISSO provides strategic guidance and recommendations for strategic planning and improvement to the systems/applications

#### **CYBERSECURITY SR. ORACLE ADMINISTRATOR**

Education: Bachelor's degree in Computer Science, Engineering or similar technical Degree.

Experience: Three (3) years of professional/technical experience

Duties/Responsibilities: The Cybersecurity Sr. Oracle Administrator performs a range of tasks from resetting user passwords, migrating Oracle Database / environment to new platform (I.E. 10g to 11G), and developing programs and reports in APEX, Java. The Sr. Oracle Administrator performs deployments, maintenance, and support for databases, underlying database management systems, and operating systems. Monitors database performance, performs analyses, and determines and implements solutions for improvements. The Sr. Oracle Administrator ensures the viability, redundancy, archiving, purging, and disaster recovery for databases, supporting systems, and integrated applications. Understands related security vulnerabilities and implements measures to ensure database integrity, confidentiality, and availability in conformance with applicable regulations and industry standards. Understands and performs configuration of hardware platforms for server systems including hardware components, fault tolerance, data storage. Performs monitoring, analysis, and troubleshooting for database and system anomalies and errors. Documents support policies, procedures, and standards.

#### **CYBERSECURITY SR. SHAREPOINT ADMINISTRATOR**

Education: Bachelor's degree in Computer Science, Engineering or similar technical Degree.

Experience: Three (3) years of professional/technical experience

Duties/Responsibilities: The Cybersecurity Sr. Sharepoint Admin performs tasks ranging from Maintain task completion charts in SharePoint to Database systems and application data architecture, planning, and optimization.

#### **CYBERSECURITY SR. SHAREPOINT DEVELOPER**

Education: Bachelor's degree in Computer Science, Engineering or similar technical Degree.

Experience: Three (3) years of professional/technical experience

Duties/Responsibilities: The Cybersecurity Sr. Sharepoint Developer performs a range of tasks from setting user permissions to designing and developing applications in various program languages such as C#, .net, and ASP.NET, to include migrating applications to new operating environments while being able to determine the best technologies/tools to use when developing applications.

#### **CYBERSECURITY SR. SYSTEM ADMINISTRATOR**

Education: Bachelor's degree in Computer Science, Engineering or similar technical Degree.

Experience: Three (3) years of professional/technical experience

Duties/Responsibilities: The Cybersecurity Sr. System Administrator performs basic tasks ranging from Perform SQL log checks to SharePoint PowerShell Command lets and object modeling.

#### **CYBERSECURITY PHP DEVELOPER**

Education: Bachelor's degree in Computer Science, Engineering or similar technical Degree.

Experience: Five (5) years of professional/technical experience

Duties/Responsibilities: The Cybersecurity PHP Developer is responsible for creating and implementing an array of Web-based products using PHP, MySQL, Ajax, and JavaScript. The PHP Developer will develop back-end components, connect the application with other web services, and assist front-end developers by ensuring their work integrates with the application.

#### **CYBERSECURITY DATABASE ADMINISTRATOR**

Education: Bachelor's degree in Computer Science, Engineering or similar technical Degree.

Experience: Three (3) years of professional/technical experience

Duties/Responsibilities: The Cybersecurity Database Administrator designs, develops, and maintains software for a variety of engineering applications. Works with analysts to understand their analytic or interface requirements. Designs, develops, and tests operating systems-level software, compilers, tools, interfaces, network distribution

software applications, and embedded systems software. Creates, formulates, and analyzes operational specifications software requirements.

#### **CYBERSECURITY WEB APPLICATION PROGRAMMER/Sr. .NET DEVELOPER**

**Education:** Bachelor's degree in Computer Science, Engineering or similar technical Degree.

**Experience:** Five (5) years of professional/technical experience

**Duties/Responsibilities:** Provides application development and technical support for internal and external Webs; develops Web pages; collaborates with graphic artists to develop Web page graphics that support interactive, marketing-focused content. Provides technical consultation in new systems development, new package evaluations and enhancements of existing systems; prepares functional specifications from which programs will be written, then designs, codes, tests, debugs and documents programs. Participates in the technical design, development, testing, implementation and maintenance of Web site enhancements; plans, schedules and conducts systems tests, monitors test results, and takes appropriate corrective action. May prepare technical user guides

#### **CYBERSECURITY UI/UX DESIGNER**

**Education:** Bachelor's degree in Computer Science, Engineering or similar technical Degree.

**Experience:** Five (5) years of professional/technical experience

**Duties/Responsibilities:** Support, through software design and development experience, usability engineering, training systems design and evaluation, and next generation research. Responsible for translating project requirements into UI designs that incorporate interface usability and user experience best practices. Translate user needs into detailed design specifications; provide prototype and end-user applications and enhancements based on specifications. Develop rapid prototypes of potential new products, features, or widgets either as proof of concept or to assist in requirements. Participate in all stages of software development while providing UI technical expertise: including refining UI vision, gathering user feedback, UI design, coding, testing, release, and support. Serve as the company expert in all areas of usability, graphic design and product branding. Utilize experience when leveraging internal groups to brainstorm completely new graphical interfaces based on existing strategy or innovating within existing products. Provide detailed, reusable product documentation. Manage risk by identifying, quantifying and monitoring potential threats to the project or development lifecycle. Contribute to early identification of project issues and opportunities for product improvement.

#### **CYBERSECURITY SYSTEMS ADMINISTRATOR (UNIX)**

**Education:** Bachelor's degree in Computer Science, Engineering or similar technical Degree.

**Experience:** Five (5) years of professional/technical experience

**Duties/Responsibilities:** The Cybersecurity Systems Administrator understands the TCP/IP, information security/authorization profiles, or system administration of Unix or Windows networks/systems. Manages and provides software support for the servers, laptops, desktop personal computers, and printers, including the configuration of the hardware devices, testing new software and designing the structure of the network. Monitors and tests the system configuration, operating system software, networking software, computer hardware, and server event log. Monitors and develops the procedures for backups of the servers.

#### **CYBERSECURITY SR. JAVA DEVELOPER**

**Education:** Bachelor's degree in Computer Science, Engineering or similar technical Degree.

**Experience:** Five (5) years of professional/technical experience

**Duties/Responsibilities:** Work collaboratively with other teams; QA, UX, etc. Responsible for assisting in customization and development of application systems Designs, programs, and codes software in response to specific business requirements Understands how to optimize joint development efforts through appropriate project design, database use, code creation, and software architecture Develops design specifications in compliance with IT Architecture Resolves user issues and suggestions. Develop and maintain complex software components / systems in compliance with department standards Develop and maintain comprehensive technical design documentation; including but not limited to software system architecture, high-level design, detailed design, database design, class diagrams, physical & deployment diagrams, etc. Coordinate and lead the review and approval process of all appropriate software system documentation Implement approved system architecture improvements; provide feedback during associated discussions / reviews.

#### **CYBERSECURITY SAKAI JAVA DEVELOPER**

**Education:** Bachelor's degree in Computer Science, Engineering or similar technical Degree.

Experience: Five (5) years of professional/technical experience

Duties/Responsibilities: Provides program management technical support, analysis, data management, and server management to sustain the USU operational computing environment. Designs, implements, and maintains policies and procedures in support of, but not limited to, data storage/back-up/recovery, server software and firmware upgrades, and standard server maintenance. Support may also include the design, implementation, and/or on-going sustainment of Microsoft Active Directory services to include forest creation, establishment or trust relationship, and account creation and maintenance. Provides support for Windows Server, CentOS, RedHat, Apache, Tomcat, Kual, Sakai and other operating system and application servers as defined.

#### CYBERSECURITY JAVA DEVELOPER

Education: Bachelor's degree in Computer Science, Engineering or similar technical Degree.

Experience: Five (5) years of professional/technical experience

Duties/Responsibilities: Work collaboratively with other teams; QA, UX, etc. Responsible for assisting in customization and development of application systems Designs, programs, and codes software in response to specific business requirements Understands how to optimize joint development efforts through appropriate project design, database use, code creation, and software architecture Develops design specifications in compliance with IT Architecture Resolves user issues and suggestions. Develop and maintain complex software components / systems in compliance with department standards Develop and maintain comprehensive technical design documentation; including but not limited to software system architecture, high-level design, detailed design, database design, class diagrams, physical & deployment diagrams, etc. Coordinate and lead the review and approval process of all appropriate software system documentation Implement approved system architecture improvements; provide feedback during associated discussions / reviews.

#### CYBERSECURITY SYSTEM ADMINISTRATOR

Education: Bachelor's degree in Computer Science, Engineering or similar technical Degree.

Experience: Two (2) years of professional/technical experience

Duties/Responsibilities: The Cybersecurity Systems Administrator understands the TCP/IP, information security/authorization profiles, or system administration of Unix or Windows networks/systems. Manages and provides software support for the servers, laptops, desktop personal computers, and printers, including the configuration of the hardware devices, testing new software and designing the structure of the network. Monitors and tests the system configuration, operating system software, networking software, computer hardware, and server event log. Monitors and develops the procedures for backups of the servers.

#### CYBERSECURITY LINAC SYSTEMS ADMINISTRATOR

Education: Bachelor's degree in Computer Science, Engineering or similar technical Degree.

Experience: Two (2) years of professional/technical experience

Duties/Responsibilities: The Cybersecurity LINAC Systems Administrator understands the TCP/IP, information security/authorization profiles, or system administration of Unix or Windows networks/systems. Manages and provides software support for the servers, laptops, desktop personal computers, and printers, including the configuration of the hardware devices, testing new software and designing the structure of the network. Monitors and tests the system configuration, operating system software, networking software, computer hardware, and server event log. Monitors and develops the procedures for backups of the servers.

#### CYBERSECURITY TECHNICIAN

Education: Bachelor's degree in Computer Science, Engineering or similar technical Degree.

Experience: Two (2) years of professional/technical experience

Duties/Responsibilities: Performs assessment of present levels of cyber security, defines acceptable levels of risk, trains all personnel in proper cyber hygiene and establishes formal maintenance procedures. Performs privacy impact assessments and provides PII data security and monitoring, and migration strategies. Identifies potential vulnerabilities to cyber and information security using penetration testing and red teams. Provides technologies for identification, modeling, and predictive analysis of cyber threats.

#### CYBERSECURITY LOCAL AREA NETWORK (LAN) ENGINEER/TECHNICIAN

Education: Bachelor's degree in Computer Science, Engineering or similar technical Degree.

Experience: Five (5) years of professional/technical experience

Duties/Responsibilities: Performs tasks on both the hardware and software system solutions including the subsystem level. Ensures that technical designs are properly documented. Performs reliability determinations, and participates in the overall testing of network design and protocols circuitry. Installs and modifies computer systems software. Performs research on new and existing computer systems software. Installs peripheral computer equipment and insures the equipment functions properly. Must be familiar with LAN security for LAN/WAN applications.

#### **CYBERSECURITY NETWORK TECHNICIAN**

Education: Bachelor's degree in Computer Science, Engineering or similar technical Degree.

Experience: One (1) years of professional/technical experience

Duties/Responsibilities: Under minimal supervision designs and coordinates the installation and acceptance testing of the system network. Monitors network hardware operations to ensure properly set configuration options. Plans implementation of enhancements and upgrades to the network; performs cost/benefit studies of network configurations and recommends enhancements; directs acquisition, installation, and testing of network hardware; advises network users of hardware requirements, configurations, and limitations; and isolates, resolves, or circumvents network problems. May provide daily supervision and direction to support staff.

#### **CYBERSECURITY MICROSERVICE ENGINEER**

Education: Bachelor's degree in Computer Science, Engineering or similar technical Degree.

Experience: Five (5) years of professional/technical experience

Duties/Responsibilities: Works with Technical Team to create the UI High level and Detailed Design for the applications. Performs hands on coding using Java/J2EE & unit testing Interact with tech lead to understand technology direction/changes, standards and best practices. Resolve technical issues for designers and developers during project lifecycle. Excellent problem solving/troubleshooting skills on Java/J2EE technologies. Experience working with coordination of multiple teams. Designs, develops, and implements web-based Java applications to support business requirements. Follows approved life cycle methodologies, creates design documents, and performs program coding and testing. Resolves technical issues through debugging, research, and investigation. Relies on experience and judgment to plan and accomplish goals. Contributes to the Design and develop high quality software for large scale Java/Spring Batch/Microservice Applications. Perform unit and system testing of application code as well as execution of implementation activities. Analyze business requirements, and create technical design documents that are in accordance with the company's architecture standards. Ensures that expected application performance levels are achieved. Designs, codes, tests, debugs, documents, maintains, and modifies computer programs of high complexity, significance, and risk. Performs and/or leads design, coding, testing, implementation, and documentation of solution. Develops basic and detailed program specifications.

#### **CYBERSECURITY G SUITE/SERVERLESS DEVELOPER**

Education: Bachelor's degree in Computer Science, Engineering or similar technical Degree.

Experience: Two (2) years of professional/technical experience

Duties/Responsibilities: Designs, develops, enhances, debugs, and implements software. Troubleshoots production problems related to software applications. Researches, tests, builds, and coordinates the conversion and/or integration of new products based on client requirements. Designs and develops new software products or major enhancements to existing software. Addresses problems of systems integration, compatibility, and multiple platforms.

Consults with project teams and end users to identify application requirements. Performs feasibility analysis on potential future projects to management. Assists in the evaluation and recommendation of application software packages, application integration and testing tools. Resolves problems with software and responds to suggestions for improvements and enhancements. Serves as team leader on projects. Instructs, assigns, directs, and checks the work of other software developers on development team. Participates in development of software user manuals. Creates, modifies, and all maintains software. Perform concept and requirements analyses in support of all corrective, adaptive, and perfect changes to system and services. Design and execute component and system tests. Possess knowledge, experience, and expertise in the full spectrum of the software development life cycle.

#### **CYBERSECURITY ASSET MANAGER, Sr.**

Education: Bachelor's degree in Computer Science, Engineering or similar technical Degree.

Experience: Seven (7) years of professional/technical experience

Duties/Responsibilities: Provides extensive logistics support for transporting and managing assets throughout their useful lifecycle. Prepare equipment and materials for final disposition, managing accurate accounting. Coordinates the deployment, movement, and disposition of assets. Facilitates, prepares, and executes asset deliveries and transfers to ensure that all appointments, inventories, and transactions are completed in an accurate, timely manner. Leverages vendor relationships to secure competitive price quotes for government contracts.

**CYBERSECURITY ASSISTANT CONTRACT TECHNICAL REPRESENTATIVE, Jr.**

Education: Associates' degree in Computer Science, Engineering or similar technical Degree.

Experience: Two (2) years of professional/technical experience

Duties/Responsibilities: Provides user support and customer service on supported computer applications and platforms. Responds to requests for assistance, troubleshoots problems and advises on the appropriate action. Elevate issues as needed. Maintains logs and other documentation for analyses.

**CYBERSECURITY ASSISTANT CONTRACT TECHNICAL REPRESENTATIVE, Sr.**

Education: Bachelor's degree in Computer Science, Engineering or similar technical Degree.

Experience: Seven (7) years of professional/technical experience

Duties/Responsibilities: Provides user support and customer service on supported computer applications and platforms. Responds to requests for assistance, troubleshoots problems and advises on the appropriate action. Elevate issues as needed. Maintains logs and other documentation for analyses.

**CYBERSECURITY AV/VTC LEAD, Sr.**

Education: Bachelor's degree in Computer Science, Engineering or similar technical Degree.

Experience: Five (5) years of professional/technical experience

Duties/Responsibilities: Performs system and maintenance checks on all AV/VTC devices for all conference rooms and remote locations. Maintains and supports unclassified and classified VTC hardware by conducting monthly loop-back VTCs to check for issues with audio or video. Utilizes a checklist to ensure that all systems receive routine system and maintenance checks, reporting and communicating all deficiencies that require repairs. In addition, the checklist is used to coordinate preventative maintenance inspections with third party maintenance contractors. Schedules, builds, and monitors multiple video teleconference rooms, coordinating meetings between local and remote sites, ensuring needs are met, including room layout, presentation systems and security requirements. Provides detailed documentation including weekly reports, customer correspondence, and assists with testing and troubleshooting of current and new equipment. Responsible for operating, scheduling, organizing and executing audio/video conferences and event support.

**CYBERSECURITY BUSINESS PROCESS SPECIALIST, Jr.**

Education: Associate's degree in Computer Science, Engineering or similar technical Degree.

Experience: Two (2) years of professional/technical experience

Duties/Responsibilities: Analyzes process and re-engineering, with an understanding of technical problems and solutions as they relate to the current and future business environment. Creates process change by integrating new processes with existing ones and communicating these changes to impacted Business Systems teams. Recommends and facilitates quality improvement efforts.

**CYBERSECURITY CONFIGURATION MANAGER, Sr.**

Education: Bachelor's degree in Computer Science, Engineering or similar technical Degree.

Experience: Six (6) years of professional/technical experience

Duties/Responsibilities: Oversee baseline configurations for applications, software, and hardware assets. Identify, organize, and control software and hardware configuration changes. Identify and coordinate processes for version management, system build, backup and recovery, archiving, and change management. Support and facilitate auditing and reporting.

**CYBERSECURITY DATABASE ANALYST**

Education: Bachelor's degree in Computer Science, Engineering or similar technical Degree.

Experience: Two (2) years of professional/technical experience

**Duties/Responsibilities:** Provides all activities related to the administration of computerized databases. Projects long-range requirements for database administration and design in conjunction with other managers in the information systems function. Designs, creates, and maintains databases in a client/server environment. Conducts quality control and auditing of databases to ensure accurate and appropriate use of data. Advises users on access to various databases. Designs, implements, and maintains complex databases with respect to job control language, access methods, access time, device allocation, validation checks, organization, protection and security, documentation, and statistical methods. Applies knowledge and experience with database technologies, development methodologies, and front-end (e.g. COGNOS)/back-end programming languages (e.g. SQL). Performs database programming and supports systems design. Includes maintenance of database dictionaries, overall monitoring of standards and procedures, file design and storage, and integration of systems through database design.

#### **CYBERSECURITY ENTERPRISE ARCHITECT**

**Education:** Bachelor's degree in Computer Science, Engineering or similar technical Degree.

**Experience:** Ten (10) years of professional/technical experience

**Duties/Responsibilities:** Responsible for designing and implementing information systems which will adequately support the enterprise infrastructure of an organization. Analyzes system requirements and ensures that systems will offer security and will be effectively integrated with current applications. Ensures that all systems are working at optimal levels and offers engineering support to applications development regarding new technologies and system requirements. Has thorough knowledge of infrastructure, application programming, and web and software applications.

#### **CYBERSECURITY HELP DESK MANAGER, Sr.**

**Education:** Bachelor's degree in Computer Science, Engineering or similar technical Degree.

**Experience:** Ten (10) years of professional/technical experience

**Duties/Responsibilities:** Provides daily supervision and direction to staff that are responsible for phone and in-person support to users in the areas of computer applications and platforms. Serves as the first point of contact for troubleshooting hardware/software PC and printer problems.

#### **CYBERSECURITY INFORMATION ASSURANCE LEAD, Sr.**

**Education:** Bachelor's degree in Computer Science, Engineering or similar technical Degree.

**Experience:** Five (5) years of professional/technical experience

**Duties/Responsibilities:** Demonstrated experience in analytical problem solving, and understanding network protocols, architectures and with IA products and systems. Strong verbal and written communication skills required, with the ability to interact and negotiate system/network requirements with clients. Experience in supporting an Information Assurance (IA) programs, requiring extensive experience in Computer Network Defense (CND), system security design, network architecture, security practices, and IA tools.

- Determines enterprise information assurance and security standards.
- Develops and implements information assurance/security standards and procedures.
- Coordinates, develops, and evaluates security programs for an organization.
- Recommends information assurance/security solutions to support customers' requirements.
- Identifies, reports, and resolves security violations.
- Establishes and satisfies information assurance and security requirements based upon the analysis of user, policy, regulatory, and resource demands.

#### **CYBERSECURITY IT FUNCTIONAL SME, Sr.**

**Education:** Bachelor's degree in Computer Science, Engineering or similar technical Degree.

**Experience:** Ten (10) years of professional/technical experience

**Duties/Responsibilities:** Serves as subject matter expert possessing in-depth knowledge of Technology Refreshment, Capital Planning, and Records Management. Provides technical knowledge and analysis of highly specialized applications and operational environments, high-level functional systems analysis, design, integration, documentation and implementation advice on exceptionally complex problems that need extensive knowledge of

the subject matter for effective implementation. Participates as needed in all phases of software development with emphasis on the planning, analysis, testing, integration, documentation, and presentation phases. Applies principles, methods and knowledge of the functional area of capability to specific task order requirements to arrive at automated solutions.

#### **CYBERSECURITY NETWORK SECURITY ENGINEER, Jr.**

Education: Associates's degree in Computer Science, Engineering or similar technical Degree.

Experience: Two (2) years of professional/technical experience

Duties/Responsibilities: Performs standard project tasks to analyze information security requirements, translate these into security designs, implements these designs, and tests effectiveness. Has working knowledge of standard information security products including firewalls, intrusion detection systems, anti-virus systems, vulnerability testing, and security analysis tools. Requires competence in all phases of security requirements analysis, and information security system design as well as available products, and management practices. Requires understanding of U.S. Government security policy including Department of Defense and appropriate civil agencies such as NIST, as well as commercial "best practices". Experience includes holding technical responsibility for projects, and a successful history of task accomplishment.

#### **CYBERSECURITY NETWORK SECURITY ENGINEER, Sr.**

Education: Bachelor's degree in Computer Science, Engineering or similar technical Degree.

Experience: Ten (10) years of professional/technical experience

Duties/Responsibilities: Performs standard project tasks to analyze information security requirements, translate these into security designs, implements these designs, and tests effectiveness. Has working knowledge of standard information security products including firewalls, intrusion detection systems, anti-virus systems, vulnerability testing, and security analysis tools. Requires competence in all phases of security requirements analysis, and information security system design as well as available products, and management practices. Requires understanding of U.S. Government security policy including Department of Defense and appropriate civil agencies such as NIST, as well as commercial "best practices". Experience includes holding technical responsibility for projects, and a successful history of task accomplishment.

#### **CYBERSECURITY NETWORK SYSTEMS ENGINEER, Int.**

Education: Bachelor's degree in Computer Science, Engineering or similar technical Degree.

Experience: Five (5) years of professional/technical experience

Duties/Responsibilities: Develop, maintain and support technical infrastructure, hardware, and system software components for mid- to large-sized projects. Independently performs assignments with instruction limited to results expected. Determines and develops approach to solutions. Receives technical guidance only for unusual or complex problems or issues. Performs installation, maintenance, and support of system software/hardware and provides user support. Identifies key barriers/core problems and applies problem solving skills in order to deal with complex situations. Troubleshoots and resolves complex problems. Makes decisions under conditions of uncertainty, sometimes with incomplete information, that produce effective end results. Performs engineering and roll-out implementation, configuration, debugging and support for multiple platforms. Monitor and tune platforms to ensure expected availability and performance levels are achieved.

#### **CYBERSECURITY NETWORK SYSTEMS ENGINEER, Jr.**

Education: Associates' degree in Computer Science, Engineering or similar technical Degree.

Experience: Two (2) years of professional/technical experience

Duties/Responsibilities: Develop, maintain and support technical infrastructure, hardware, and system software components for mid- to large-sized projects. Independently performs assignments with instruction limited to results expected. Determines and develops approach to solutions. Receives technical guidance only for unusual or complex problems or issues. Performs installation, maintenance, and support of system software/hardware and provides user support. Identifies key barriers/core problems and applies problem solving skills in order to deal with complex situations. Troubleshoots and resolves complex problems. Makes decisions under conditions of uncertainty, sometimes with incomplete information, that produce effective end results. Performs engineering and roll-out implementation, configuration, debugging and support for multiple platforms. Monitor and tune platforms to ensure expected availability and performance levels are achieved.

#### **CYBERSECURITY NETWORK SYSTEMS ENGINEER, Sr**

Education: Bachelor's degree in Computer Science, Engineering or similar technical Degree.

Experience: Ten (10) years of professional/technical experience

Duties/Responsibilities: Develop, maintain and support technical infrastructure, hardware, and system software components for mid- to large-sized projects. Independently performs assignments with instruction limited to results expected. Determines and develops approach to solutions. Receives technical guidance only for unusual or complex problems or issues. Performs installation, maintenance, and support of system software/hardware and provides user support. Identifies key barriers/core problems and applies problem solving skills in order to deal with complex situations. Troubleshoots and resolves complex problems. Makes decisions under conditions of uncertainty, sometimes with incomplete information, that produce effective end results. Performs engineering and roll-out implementation, configuration, debugging and support for multiple platforms. Monitor and tune platforms to ensure expected availability and performance levels are achieved.

#### CYBERSECURITY PROGRAM MANAGER

Education: Bachelor's degree in Computer Science, Engineering or similar technical Degree.

Experience: Eight (8) years of professional/technical experience

Duties/Responsibilities: Responsible for project oversight and direction. Ensures conformance with work standards; interprets policies, procedures, goals and objectives of the organization. Ensures appropriate resources are applied to the project. Nature of work involves complex information technology project management, strategic and tactical planning, coordination, control, and critical decision-making. Requires experience related to work being performed. May also involve complex technical engineering design and technology architectural tasks.

#### CYBERSECURITY SERVICE DESK TECHNICIAN, Jr.

Education: Bachelor's degree in Computer Science, Engineering or similar technical Degree.

Experience: One (1) year of professional/technical experience

Duties/Responsibilities: Under direct supervision, provides support to end-users for PC, server or mainframe applications, and hardware. May interact with network services, software systems engineering and/or applications development to restore service and/or identify and correct core problems. Simulates or recreates user problems to resolve operating difficulties. Recommends systems modifications to reduce user problems. Refers more complex problems to appropriate personnel.

#### CYBERSECURITY SERVICE DESK TECHNICIAN, Sr.

Education: Bachelor's degree in Computer Science, Engineering or similar technical Degree.

Experience: Five (5) years of professional/technical experience

Duties/Responsibilities: Under direct supervision, provides support to end-users for PC, server or mainframe applications, and hardware. May interact with network services, software systems engineering and/or applications development to restore service and/or identify and correct core problems. Simulates or recreates user problems to resolve operating difficulties. Recommends systems modifications to reduce user problems. Refers more complex problems to appropriate personnel.

#### CYBERSECURITY SOFTWARE DEVELOPER, Jr.

Education: Associate's degree in Computer Science, Engineering or similar technical Degree.

Experience: Two (2) years of professional/technical experience

Duties/Responsibilities: Codes, tests, debugs, implements, and documents programs. Creates appropriate documentation in work assignments such as program code, and technical documentation. Gathers information from existing systems, analyzes program and time requirements. Assists project manager in preparing time estimates and justification for assigned tasks Supports project personnel in resolving fairly complex program problems\Works with client and management to resolve issues and validate programming requirements within their areas of responsibility. Provides technical advice on complex programming. Strong verbal, written, and interpersonal communication skills with technical and non-technical audiences. Experience in communicating functional and technical requirements to the mid and junior developers and facilitate the development of solutions. Conducts quality assurance activities such as peer reviews, testing, etc.

#### CYBERSECURITY SOFTWARE DEVELOPER, Sr.

Education: Bachelor's degree in Computer Science, Engineering or similar technical Degree.

Experience: Ten (10) years of professional/technical experience

Duties/Responsibilities: Codes, tests, debugs, implements, and documents programs. Creates appropriate documentation in work assignments such as program code, and technical documentation. Gathers information from existing systems, analyzes program and time requirements. Assists project manager in preparing time estimates and justification for assigned tasks Supports project personnel in resolving fairly complex program problems\Works with client and management to resolve issues and validate programming requirements within their areas of responsibility. Provides technical advice on complex programming. Strong verbal, written, and interpersonal communication skills with technical and non-technical audiences. Experience in communicating functional and technical requirements to the mid and junior developers and facilitate the development of solutions. Conducts quality assurance activities such as peer reviews, testing, etc.

#### **CYBERSECURITY SOFTWARE ENGINEER, Int.**

Education: Bachelor's degree in Computer Science, Engineering or similar technical Degree.

Experience: Four (4) years of professional/technical experience

Duties/Responsibilities: Formulates/defines specifications for complex operating software programming applications and modifies/maintains business applications using releases and utilities from the manufacturer. Administers Databases. Designs, codes, tests, debugs, and documents those programs. Assists in all phases of software systems programming applications. Evaluates new and existing software products.

#### **CYBERSECURITY SOFTWARE ENGINEER, Sr.**

Education: Bachelor's degree in Computer Science, Engineering or similar technical Degree.

Experience: Eight (8) years of professional/technical experience

Duties/Responsibilities: Formulates/defines specifications for complex operating software programming applications and modifies/maintains business applications using releases and utilities from the manufacturer. Administers Databases. Designs, codes, tests, debugs, and documents those programs. Assists in all phases of software systems programming applications. Evaluates new and existing software products.

#### **CYBERSECURITY SOFTWARE MANAGER, Sr.**

Education: Bachelor's degree in Computer Science, Engineering or similar technical Degree.

Experience: Seven (7) years of professional/technical experience

Duties/Responsibilities: In conjunction with the Asset Manager, manages software to include version number, licenses, quantities available versus used, and license keys. Also, manages ONR use of Enterprise Software License Agreements in support of renewals, promotes bundling, and recommends improvements such as co-termining.

#### **CYBERSECURITY WEB ENGINEER**

Education: Bachelor's degree in Computer Science, Engineering or similar technical Degree.

Experience: Four (4) years of professional/technical experience

Duties/Responsibilities: Under general direction, responsible for program design, coding, testing, debugging and documentation. Has full technical knowledge of all phases of web-based applications systems analysis and programming. Has a general understanding of the business or function for which applications is designed.

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

**1. SCOPE**

- a. The prices, terms and conditions stated under Special Item Number 54151S Information Technology Professional Services apply exclusively to IT 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 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 Professional Services.

## 9. INDEPENDENT CONTRACTOR

All 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.

## 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 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 PROFESSIONAL SERVICES AND PRICING

- a. The Contractor shall provide a description of each type of IT Service offered under Special Item Numbers 54151S IT 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 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

### IT LABOR CATEGORY DESCRIPTIONS - 54151S

#### PROJECT MANAGER I

Education: Bachelor's Degree in Computer Science, Engineering or similar technical Degree.

Experience: Five (5) years of professional/technical experience

Duties/Responsibilities: Acts as manager and overall point of contact for a specific project within an overall enterprise-wide IT solution program. Directs project-specific IT staff and reviews work products for completeness and adherence to customer requirements. Provides communication to management to review project plans, status reports, and deliverables. Develops overall project milestones and monitors the execution of the project against planned timelines.

#### QA/QC/TESTER

Education: Bachelor's Degree in Computer Science, Engineering or similar technical Degree.

Experience: Two (2) years of professional/technical experience

Duties/Responsibilities: Provides development of project Software Quality Assurance Plan and the implementation of procedures that conforms to the requirements of the contract. Provides an independent assessment of how the project's software development process is being implemented relative to the defined process and recommends methods to optimize the organization's process.

#### SOFTWARE DEVELOPER

Education: Bachelor's Degree in Computer Science, Engineering or similar technical Degree.

Experience: Three (3) years of professional/technical experience

Duties/Responsibilities: Perform as a technical expert in the design development, coding, testing, and debugging new software or complex enhancements to existing software. Work with technical staff to understand and to

develop resolution of software problems. Resolve customer complaints with software and respond to suggestions for software modifications or enhancements. Participate in the development of software user manuals.

#### **DATABASE ADMINISTRATOR**

**Education:** Bachelor's Degree in Computer Science, Engineering or similar technical Degree.

**Experience:** Three (3) years of professional/technical experience

**Duties/Responsibilities:** Administers, maintains, develops and implements policies and procedures for ensuring the security and integrity of the company database. Implements data models and database designs, data access and table maintenance codes; resolves database performance issues, database capacity issues, replication, and other distributed data issues.

#### **BUSINESS SYSTEMS ANALYST**

**Education:** Bachelor's Degree in Computer Science, Engineering or similar technical Degree.

**Experience:** One (1) year of professional/technical experience

**Duties/Responsibilities:** Reviews, analyzes, and evaluates business systems and user needs. Formulates systems to parallel overall business strategies. Writes detailed description of user needs, program functions, and steps required to develop or modify computer programs. Provides consultation on complex projects and is considered to be the top-level contributor/specialist.

#### **ADVANCED PROJECT MANAGER**

**Education:** Bachelor's Degree in Computer Science, Engineering or similar technical Degree.

**Experience:** Seven (7) years of professional/technical experience and Three (3) years' experience in Project Management specialization in healthcare systems.

**Duties/Responsibilities:** Maintains the project schedule and ensures that deliverables are completed in a timely manner. Oversees project cost control and cost projections. Knowledgeable in the use of the project management tools used for activity assignment, resource planning, and cost control. Ensures the invoicing process provides the proper information and distribution on the invoices. Ensures smooth coordination consistent with the contract and task order requirements. Ensures problem resolution and customer satisfaction for individual task orders.

#### **ANALYST**

**Education:** Bachelor's Degree in Computer Science, Engineering or similar technical Degree.

**Experience:** Eight (8) years' experience in a specialized subject area or field of expertise.

**Duties/Responsibilities:** Develops or implements advanced technical ideas and guides their development. Conceives, plans and implements approaches to solve complex problems of diverse scope. Manages technical project teams to establish system/application specifications and resolve problems, writes and edits technical and commercial documentation. Extensive experience in document review process, which includes draft review, review comments, comment resolution, draft updating, and final document development.

#### **ARCHITECT**

**Education:** BA/BS Information Systems, Computer Science, Engineering, Business, or related discipline or equivalent industry experience.

**Experience:** At least five (5) years of experience in information systems implementation, change management efforts or business process redesign.

**Duties/Responsibilities:** Apply broad management skills and specialized functional and technical expertise to guide project teams in delivering client solutions or to manage the day-to-day operations of information architecture design. Execute architecture and integration strategies and provide expertise in industry, process or information technology areas. Plan and manage the work of information systems project teams. Scope systems requirements and assimilate data and develop, maintain and modify system architect products.

#### **BUSINESS SYSTEMS ANALYST**

**Education:** Bachelor's Degree in Computer Science, Engineering or similar technical Degree.

**Experience:** One (1) year of professional/technical experience

Duties/Responsibilities: Reviews, analyzes, and evaluates business systems and user needs. Formulates systems to parallel overall business strategies. Writes detailed description of user needs, program functions, and steps required to develop or modify computer programs. Provides consultation on complex projects and is considered to be the top-level contributor/specialist.

#### CA UNICENTER ENGINEER

Education: BA/BS in Computer Science, Engineering or other business-related disciplines with emphasis on computer systems, computer engineering or data communications and/or current functional area certifications.

Experience: Minimum five (5) years' experience planning, installing, configuring and implementing distributed, server based, enterprise management computing environments and current functional area certifications.

Duties/Responsibilities: Uses In-depth knowledge of CA's Unicenter Enterprise Management Suite of software to architect, implement, deploy and support complex infrastructure management environments. Uses extensive experience in the development of specific enterprise Management disciplines including design and development of event correlation, automation and complex enterprise management policies.

#### CLINICAL EXPERT FOR INFORMATION TECHNOLOGY

Education: BA/BS Information Systems, Computer Science, Engineering, Business, or related discipline or equivalent industry experience.

Experience: Ten (10) years of hands-on specialty or healthcare practice experience, ability to apply concepts in information technology to the management & processing of data, information and knowledge in health care delivery. Have demonstrated ability in the representation of user requirements (systems analysis) for at least one major military medical system.

Duties/Responsibilities: Ability to understand and apply analytical skills and clinical application expertise to support process improvement, studies and analysis projects. Typical duties include analysis, planning, establishment of requirements, functional modeling, development of procedures, development of functional architectures, and other related management and technical duties. Requires expertise in specialty areas. Experience in general health care is highly desirable. Demonstrated experience in the functional areas of Human Resources, Medical, Reserve Components, Finance, Procurement, or Materiel Management.

#### CLINICAL EXPERT FOR INFORMATION TECHNOLOGY (HEALTH IT)

Education: BA/BS in Health Informatics, Information Systems, Computer Science, Engineering, Business, or related discipline or equivalent industry experience.

Experience: Ten (10) years of hands-on specialty or healthcare practice experience, ability to apply concepts in information technology to the management & processing of data, information and knowledge in health care delivery. Have demonstrated ability in the representation of user requirements (systems analysis) for at least one major military medical system.

Duties/Responsibilities: Ability to understand and apply analytical skills and clinical application expertise to support process improvement, studies and analysis projects. Experience in the area of IT involving the design, development, creation, use and maintenance of information systems for the healthcare industry. Automated and interoperable healthcare information systems are expected to improve medical care, lower costs, and increase efficiency. Typical duties include analysis, planning, establishment of requirements, functional modeling, development of procedures, development of functional architectures, and other related management and technical duties. Requires expertise in specialty areas. Experience in general health care is highly desirable. Demonstrated experience in the functional areas of Human Resources, Medical, Reserve Components, Finance, Procurement, or Materiel Management.

#### CONFIGURATION MANAGEMENT EXPERT

Education: BA/BS Information Systems, Computer Science, Engineering, Business, or related OR equivalent industry.

Experience: Five (5) years of experience as an enterprise-level configuration manager in a multi-system organization. Must have 1-year experience with Software Acquisition (SA) Capability Maturity Model (CMM).

Duties/Responsibilities: Lead or supervise a team of configuration management specialists that represent each entity of an organization. Establish and/or maintain a system to record modifications to hardware, software and/or documentation and maintain configuration control records and technical documents. Provide configuration baseline control throughout the life cycle of highly complex information systems as well as component software and hardware elements. Write and establish policies; and provide technical level review of proposed hardware/software configuration and program submittals. Review engineering change requests and document

impact upon configuration baseline and logistics support elements. Work closely with quality assurance and management representatives to ensure accurate and well-documented product baselines. Prepare directives for change authorization and implementation.

#### **DATABASE ADMINISTRATOR**

**Education:** Bachelor's Degree in Computer Science, Engineering or similar technical Degree.

**Experience:** Three (3) years of professional/technical experience

**Duties/Responsibilities:** Administers, maintains, develops and implements policies and procedures for ensuring the security and integrity of the company database. Implements data models and database designs, data access and table maintenance codes; resolves database performance issues, database capacity issues, replication, and other distributed data issues.

#### **DESKTOP MANAGEMENT ENGINEER**

**Education:** Bachelor's Degree or equivalent industry experience and/or current applicable functional area certifications.

**Experience:** Minimum three (3) years Enterprise Management experience. Must possess relevant and current technology certifications.

**Duties/Responsibilities:** Assists with software rollouts, hardware and software inventory, asset management and reporting. Creates, tests, distributes and maintains software delivery scripts. Researches and resolves all problems related to software delivery. Provide assistance and recommendations to management and clients on a broad range of data processing, business, or technical related topics pertaining to the architectural design and development of applied systems and software services within the enterprise management industry.

#### **DEVELOPER**

**Education:** BA/BS Information Systems, Computer Science, Engineering, Business, or related discipline or equivalent industry experience.

**Experience:** Five (5) years' experience in the information architecture arena and the development of new applications.

**Duties/Responsibilities:** Develops and applies advanced methods, theories, and research techniques in the evaluation and development of complex software applications and problems. Designs software tools and subsystems and manages their implementation. Develops network, and technical architectures for client/server and mainframe applications. Gathers and defines architecture requirements and ensures that the architectures are compatible and in compliance with the appropriate IT organization and project standards. Analyze, compile requirements and develop database solutions for database systems and related tools.

#### **DIRECTOR/ LEAD ENGINEER**

**Education:** Masters or advanced degree equivalent in Computer Science or Engineering with 5 years' experience in the acquisition of major systems.

**Experience:** Fifteen (15) years general experience in system development with 5 years of applied expertise including relevant functional experience. Experience in or specialized domain knowledge of Military Health Systems (MHS) or other major systems, software development, Communications systems and protocols.

**Duties/Responsibilities:** Acts to coordinate Systems Engineer, Architect, & Security Engineering functions; Lead Engineer is responsible for conducting technical activities for the design, development, and fielding of a department tasks; Managing the technical aspects of systems engineering managements and systems acquisition; Providing technical oversight of the overall contracts (integration, systems contractor and prime integrator activities); Responsible for attending to and resolving critical problematic, engineering, and technical issues; and providing technical representation for architecture evolution and the acquisition evolution and the acquisition of the future systems.

#### **EMERGENCY SERVICES TECHNICAL MANAGER**

**Education:** BA/BS in Computer Science, Information Systems, Engineering, Business, or other related discipline or equivalent industry experience.

**Experience:** Possess at least five (5) years of experience in information systems implementation, change management efforts or business process redesign, including experience in premium technologies.

**Duties/Responsibilities:** Possess special skills in premium technologies, such as packaged enterprise software tools and other premium market-driven technologies to enable on-demand response to solve critical network or hardware service issues. Can provide direction to project teams and interact with clients at the leadership level. Perform tasks such as: (1) Develop functional and technical information system designs; (2) Supervise business integration analysis in the development of software designs, computer programming, system testing or training curricula; (3) Lead business process redesign teams in the development of new business process architectures; (4) Design training programs for information systems users; (5) Participate in quality reviews to ensure work complies with specified standards; (6) Develop team work plans; (7) Perform workflow analyses; (8) Design and manage databases; (9) Define information systems requirements.

#### **ENTERPRISE MANAGEMENT DESKTOP ADMINISTRATOR**

**Education:** Associates Degree or equivalent experience and/or current functional area certifications.

**Experience:** Possess at least one (1) year experience utilizing Enterprise Management products. Must possess current functional area certifications.

**Duties/Responsibilities:** Support Administrator for Enterprise Management products. Provides assistance in creating, testing, distributing, and maintaining software delivery scripts and other customized inventory modules. Provides technical expertise in the design and development of a broad range of software systems and services within the enterprise management industry.

#### **ENTERPRISE MANAGEMENT ENGINEER**

**Education:** Bachelor's Degree or equivalent industry experience and/or current applicable functional area certifications.

**Experience:** Possess at least three (3) years' experience utilizing Enterprise Management products. Must possess relevant and current technology certifications.

**Duties/Responsibilities:** Possess skill at providing technical services for Enterprise Management products. Constantly evaluates the current architecture to improve overall performance. Provides assistance and recommendations on a broad range of data processing, business, or technical related topics pertaining to the architectural design and development of applied systems and software services within the enterprise management industry.

#### **ENTERPRISE MANAGEMENT TECH MANAGER**

**Education:** Bachelor's Degree or equivalent industry experience and/or current applicable functional area certifications.

**Experience:** Possess at least five (5) years' experience managing enterprise management systems and daily team operations; Providing technical guidance, consultation and direction on the broadest range of data processing applications, environments and systems; Providing innovative technical expertise in the design and development of a broad range of software systems and services.

**Duties/Responsibilities:** Possess special skills in providing staffing direction and managing team operations, site support coordination, and submission of status reports. Manages all tasks related to Enterprise Management products, and other Information Assurance (IA) compliance and remediation tools.

#### **HELP DESK SPECIALIST**

**Education:** Associates Degree or equivalent and current functional area certifications.

**Experience:** Minimum one (1) year of general IT and/or Helpdesk experience and current functional area certifications.

**Duties/Responsibilities:** Provides phone, e-mail and in-person technical support to users; serving as the initial point of contact for troubleshooting hardware and software problems.

#### **INFORMATION SYSTEMS ANALYST**

**Education:** Bachelor's degree in related technical discipline (i.e., information systems, computer science or engineering).

**Experience:** Five or more years' experience in evaluation, developing and/or analyzing information systems (IS) or information technology (IT) applied to information architectures/information systems.

**Duties/Responsibilities:** Guides users in the analysis, evaluation, selection, and implementation of ADP/information systems.

### **INFORMATION SYSTEMS ENGINEER**

**Education:** Bachelor's Degree in Computer Science or Engineering with three (3) years' experience in healthcare systems

**Experience:** Five (5) years' experience in systems engineering with three years' specialization in healthcare systems.

**Duties/Responsibilities:** Evaluates business processes and recommends technical solutions to allow an organization to perform more efficiently. Consults on the proposed infrastructure of an Information Technology department. Establishes application development standards and frameworks to be utilized for all development efforts. Defines infrastructure and architecture of an Information Technology environment.

### **INFORMATION SYSTEMS ENGINEER (HEALTH IT)**

**Education:** Bachelor's Degree in Health Informatics, Computer Science or Engineering with three (3) years' experience in healthcare systems

**Experience:** Five (5) years' experience in systems engineering with three years' specialization in healthcare systems.

**Duties/Responsibilities:** Evaluates business processes and recommends technical solutions to allow an organization to perform more efficiently. Has an understanding of how mathematical modeling and analysis can be used to design and operative healthcare delivery systems. Consults on the proposed infrastructure of an Information Technology department. Establishes application development standards and frameworks to be utilized for all development efforts. Defines infrastructure and architecture of an Information Technology environment.

### **INFORMATION SYSTEMS EXECUTIVE**

**Education:** Master's Degree in related technical discipline (i.e., information systems, computer science or engineering).

**Experience:** Ten or more years' experience in evaluation, developing and/or analyzing information systems (IS) or information technology (IT) applied to information architectures/systems. Seven (7) years applied experience in specific area of expertise including five (5) years of relevant functional experience.

**Duties/Responsibilities:** Guides users in the analysis, evaluation, selection, and implementation of ADP/information systems. Performs as senior task leader. Monitors task performance and schedules. Responsible for task completion. Directs Information Systems Analyst efforts

### **INFORMATION SYSTEMS SECURITY SPECIALIST**

**Education:** Possesses a BA/BS degree or higher in Information Systems, Computer Science, Engineering, Business, or related field.

**Experience:** Over six years of general information system experience, which includes at least four years of direct experience in information systems security in the private or public sector. Information Systems Security Specialists are well versed in all applicable Federal Regulations, Guidelines, Policies, and Procedures.

**Duties/Responsibilities:** The Information Systems Security Specialist is responsible for maintaining current and thorough knowledge of information security hardware and software products that comply with industry standards. Works with vendors, IT staff, & functional users to enhance information security. May be responsible for leading Federal organizations through the DITSCAP Certification and Accreditation Process, assist Federal Clients in preparing Accreditation Documentation Packages, and obtain associated Certifications.

### **INFORMATION TECHNOLOGY ARCHITECT**

**Education:** BA/BS Information Systems, Computer Science, Engineering, Business, or related discipline or equivalent industry experience.

**Experience:** At least five (5) years of experience in information technology arena.

**Duties/Responsibilities:** Serves as a senior member of consulting teams as a task manager or as a project leader on projects of information structure and organization. Typical duties include analysis, planning, establishment of requirements, functional modeling, development of procedures, development of functional architectures, and other related management and technical duties. As a consulting team member, collects, analyzes, and interprets data in one or more information technology specialties. Has ability to identify, analyze and resolve program support deficiencies when necessary.

### **LEAD ARCHITECT**

**Education:** Masters or Advance Degree equivalent in Computer Science or Engineering with 5 years' experience in the acquisition of military systems.

**Experience:** Fifteen (15) years' experience across the spectrum of informatics and major systems development, including relevant functional experience. Experience in or specialized domain knowledge of Military Health Systems (MHS), software development, Communications systems and protocols, DISA COE processes would be particularly valuable. Expert knowledge and thought-leader with the military systems acquisition life cycle and architectural approaches as developed by the Defense Information Systems Agency (DISA) and other similar governmental agencies.

**Duties/Responsibilities:** The Lead Architect is responsible for designing and implementing integrated networks, including hardware, software, and support facilities and/or equipment for major information systems within the DoD; thought-leader and task leader of Engineers through project completion; analyzing system/network requirements to determine current capabilities and system functions; analyzing high-level mission requirements; interviewing end-users; and reviewing business process documentation to determine system/networking requirements. Also responsible for utilizing current information about system/network technology to generate detailed sets of system requirements in graphical and textual formats for major information systems acquisitions.

### **LEAD ARCHITECT (HEALTH IT)**

**Education:** Masters or Advance Degree equivalent in Health Informatics, Computer Science or Engineering with 5 years' experience in the acquisition of military systems.

**Experience:** Fifteen (15) years' experience across the spectrum of informatics and major systems development, including relevant functional experience. Experience in or specialized domain knowledge of Military Health Systems (MHS), software development, Communications systems and protocols, DISA COE processes would be particularly valuable. Expert knowledge and thought-leader with the military systems acquisition life cycle and architectural approaches as developed by the Defense Information Systems Agency (DISA) and other similar governmental agencies.

**Duties/Responsibilities:** The Lead Architect is responsible for designing and implementing integrated networks, including hardware, software, and support facilities and/or equipment for major information systems within the DoD and Healthcare industry; thought-leader and task leader of Engineers through project completion; analyzing system/network requirements to determine current capabilities and system functions; analyzing high-level mission requirements; interviewing end-users; and reviewing business process documentation to determine system/networking requirements. Also responsible for utilizing current information about system/network technology to generate detailed sets of system requirements in graphical and textual formats for major information systems acquisitions. Able to architect and design software modules and/or products that will work together to produce desired Healthcare solutions.

### **NETWORK ADMINISTRATOR**

**Education:** Bachelor's Degree in a related discipline or equivalent industry experience.

**Experience:** Three (3) years progressive related experience with LAN design, installation, operation, maintenance and detailed knowledge of current data communications technology.

**Duties/Responsibilities:** Specific responsibilities may include: Installation and configuration of network hardware/software to meet user needs IAW established network policy. Establish detailed fault management, configuration control, and performance monitoring. Activation, back-up, deactivation, and restart of network resources/services. Problem isolation and correction; performance monitoring; and configuration control. Certification/recertification actions. Advice on operational impacts of network expansions, additions, upgrades, and reconfiguration in hardware/software suites.

### **PRINCIPAL INFORMATION ARCHITECT**

**Education:** Possesses a MA/MS degree or higher in Information Systems, Computer Science, Engineering, Business, or related field.

**Experience:** Over twelve years' experience with large-scale information technology (IT) projects. This includes over six years of direct experience in the design of integrated, enterprise-wide information architectures using Commercial-Off-the-Shelf (COTS) and Government-Off-the-Shelf (GOTS) software and hardware solutions in the private or public sector.

**Duties/Responsibilities:** As a thought leader and proven expert, the Principal Information Architect plans and designs enterprise-wide or large scale information architecture including computer hardware and software, operating systems, middleware, communications hardware and software, and security components. Ensures these

systems are compatible and in compliance with the standards for open systems architectures as they apply to the implementation and specification of complex information management solutions. Identifies necessary interfaces between enterprise solution applications and legacy IT environments. Supports all program/project planning and milestone development. Supports business case analysis and identification of alternative solutions and resulting business impacts.

#### **PRINCIPAL IT CONSULTANT**

**Education:** Possesses a MA/MS degree or higher in Information Systems, Computer Science, Engineering, Business, or related field.

**Experience:** Over twelve years' experience consulting on the design of large-scale information technology (IT) projects. This includes over six years of direct experience in the design and development of integrated enterprise-wide Commercial-Off-the-Shelf (COTS) and Government-Off-the-Shelf (GOTS) software and hardware solutions in the private or public sector.

**Duties/Responsibilities:** Principal Information Technology Consultant is a thought leader and proven expert across a broad range of Information Technology disciplines. The Principal IT Consultant provides strategic planning and delivers expert advice, assistance, guidance, and counseling in support of client's information management and technology development and improvement efforts.

#### **PRINCIPAL SYSTEM ARCHITECT**

**Education:** A degree in computer science, systems engineering, or information technology.

**Experience:** Ten (10) years of experience in information technology, related experience or equivalent combination of experience and training to meet required skill level.

**Duties/Responsibilities:** Establishes information requirements using analytical methods for enterprise-wide or large-scale information systems. Designs architectures that may include software, hardware, and communications solutions. Develops and executes architecture strategies, feasibility studies, and integration analyses. May develop network, and technical architectures for client/server and mainframe applications. Evaluates compatibility of information system development efforts with agency architectures and may advise on workflow processes, document management systems, document imaging software, network and hardware requirements.

#### **PRINCIPAL SYSTEMS ENGINEER**

**Education:** Possesses a MA/MS degree or higher in Information Systems, Computer Science, Engineering, Business, or related field.

**Experience:** Over twelve years' experience with large-scale information technology (IT) projects. This includes over six years of direct experience in the design of integrated, enterprise-wide information systems using Commercial-Off-the-Shelf (COTS) and Government-Off-the-Shelf (GOTS) software and hardware solutions in the private or public sector.

**Duties/Responsibilities:** As a thought leader and proven expert, the Principal Systems Engineer provides strategic planning, guidance, design, and engineering consulting on complex enterprise-wide information systems. PSE is responsible for computer software and system analysis and design including performance analysis, technical integration, and information technology assessment (including computer hardware and software, operating systems, middleware, communications hardware and software, and security). Has domain knowledge to include analysis, product, and IT systems support and familiarity with the C4ISR Architecture Framework.

#### **PROGRAM MANAGER**

**Education:** Possesses a MA/MS degree or higher in Information Systems, Computer Science, Engineering, Business, or related field and/or is a certified Project Management Professional.

**Experience:** Over twelve years' experience with the execution and management of large-scale Information Technology programs. This includes over six years of direct experience in leading and executing enterprise-wide IT solutions in the private or public sector. Experience managing technically and functionally diverse and complex IT programs and implementing detailed management.

**Duties/Responsibilities:** Acts as overall program manager and central point of contact for enterprise-wide IT solutions. Responsible for all aspects of program planning, execution management, and status reporting. Provides communication to customer executive management on project plans, status reports, and deliverables. Ensures all critical program issues relating to quality of service, contractual matters, and engagement performance are addressed. Ensures systems design methodologies are compatible and compliant with Program requirements. Provides technical and functional guidance to the project team, including identifying new opportunities for

technology insertion. The Program Manager manages contracts and serves as the contractor's authorized interface with the Government Contracting Officer (CO), the contract level Contracting Officer's Representative (COR), government management personnel and customer agency representatives. Formulates work standards, develops and manages contractor schedules, reviews work, supervises/directs contractor personnel. Responsible for overall contract performance, including quality assurance.

#### **PROJECT MANAGER I**

**Education:** Bachelor's Degree in Computer Science, Engineering or similar technical Degree.

**Experience:** Five (5) years of professional/technical experience

**Duties/Responsibilities:** Acts as manager and overall point of contact for a specific project within an overall enterprise-wide IT solution program. Directs project-specific IT staff and reviews work products for completeness and adherence to customer requirements. Provides communication to management to review project plans, status reports, and deliverables. Develops overall project milestones and monitors the execution of the project against planned timelines.

#### **PROJECT MANAGER II**

**Education:** Possesses a BA/BS degree or higher in Information Systems, Computer Science, Engineering, Business, or related field and/or is a certified Project Management Professional.

**Experience:** Over eight years' experience with the execution and management of large-scale Information Technology programs. This includes over four years of direct experience in managing enterprise-wide IT projects in the private or public sector.

**Duties/Responsibilities:** Acts as manager and overall point of contact for a specific project within an overall enterprise-wide IT solution program. Directs project-specific IT staff and reviews work products for completeness and adherence to customer requirements. Provides communication to management to review project plans, status reports, and deliverables. Develops overall project milestones and monitors the execution of the project against planned timelines. Directs and reviews program plans, status reports, and deliverables with Program Manager and project teams. Provides technical and functional management to one or more project teams for specific projects or subtasks. Has technical, administrative and managerial responsibilities. Supervises/directs project/team in meeting task/project requirements. Identifies and resolves problems. The Project Manager is responsible for ongoing evaluation of work and quality of services.

#### **QA/QC/TESTER**

**Education:** Bachelor's Degree in Computer Science, Engineering or similar technical Degree.

**Experience:** Two (2) years of professional/technical experience

**Duties/Responsibilities:** Provides development of project Software Quality Assurance Plan and the implementation of procedures that conforms to the requirements of the contract. Provides an independent assessment of how the project's software development process is being implemented relative to the defined process and recommends methods to optimize the organization's process.

#### **REQUIREMENTS MANAGER**

**Education:** BA/BS Information Systems, Computer Science, Engineering, Business, or related OR equivalent industry.

**Experience:** One (1) year experience with Software Acquisition (SA) Capability Maturity Model (CMM).

**Duties/Responsibilities:** Provide enterprise-wide technical management and direction for problem definition, analysis and requirements development and implementation for very complex systems in the subject matter area. Develop, update, maintain and sustain a Requirements Traceability Matrix (RTM), assign, record, track and report different RTM versions. Write and establish policies; and provide technical level review of proposed hardware/software configuration and program submittals. Decrease development costs to projects and increase planning efficiency across the system lifecycle. Provide feasible recommendations and advice to client executive management on emerging technology, system improvements, optimization and maintenance as related to requirements definitions, tracking and traceability. Communicate directions and status clearly and concisely, both in oral and written format.

#### **SENIOR HEALTH SYSTEMS ANALYST**

**Education:** BA/BS in Computer Science, Electrical Engineering, Mathematics, or other related technical discipline from an accredited college or university.

Experience: Seven (7) years of professional/technical experience and Five (5) years' experience in systems analysis specialization in healthcare systems.

Duties/Responsibilities: Planning and conducting tasks requiring a mastery of specialized techniques for selecting and/or evaluating approaches to problems or data; applying an analytical approach to a wide variety of assignments; logically assimilating the details, significance and results of various analyses, procedures and tests; maintaining release/version control; and planning, scheduling and executing project tasks based on a specialized knowledge of problem areas, methodologies and probable value of results.

#### SENIOR HEALTH SYSTEMS ANALYST (HEALTH IT)

Education: BA/BS in Health Informatics, Computer Science, Electrical Engineering, Mathematics, or other related technical discipline from an accredited college or university.

Experience: Seven (7) years of professional/technical experience and Five (5) years' experience in systems analysis specialization in healthcare systems.

Duties/Responsibilities: Planning and conducting tasks requiring a mastery of specialized techniques for selecting and/or evaluating approaches to problems or data; applying an analytical approach to a wide variety of assignments; logically assimilating the details, significance and results of various analyses, procedures and tests; maintaining release/version control; and planning, scheduling and executing project tasks based on a specialized knowledge of problem areas, methodologies and probable value of results. The Senior Health Systems Analyst will provide in-depth data analysis and evaluations of identified strategic initiatives as are necessary for the purposes of reporting to regulatory agencies and for programmatic and planning decisions. The strategic initiatives could include clinical programs or health risk-based analyses.

#### SENIOR IMPLEMENTATION SUBJECT MATTER EXPERT

Education: BS or MS degree in Computer Science, Physics, Engineering, Mathematics, or equivalent and current functional area certifications

Experience: Minimum five (5) years of experience supporting relational databases as a DBA especially DB access and security. Three (3) years or more experience working with the computing infrastructure side support for LDAP v3 (OID or other LDAP's) and Application Server Infrastructure and current functional area certifications.

Duties/Responsibilities: Responsible for new program development and/or complete lifecycle support services. Provide expert guidance and direction at the highest expert and technical levels for areas requiring innovation, research, or tasks involving policy at a high level affecting the entire enterprise. Functional activities include the business and technical components of system architecture development, systems integration modeling, and simulation, designing and leading implementations of new systems and/or other IS/IT related activities. Lead process modeling and re-engineering efforts and discover new process automation techniques and technologies. Introduce and oversee the integration of new technologies, plans, designs and systems into ongoing operations. Lead efforts from requirements gathering through implementation and sustainment. Supervise and coordinate the efforts of a team performing similar work.

#### SENIOR INFORMATION ARCHITECT

Education: Possesses a BA/BS degree or higher in Information Systems, Computer Science, Engineering, Business, or related field.

Experience: Over eight years' experience with the design of large-scale information technology (IT) projects. This includes over four years of direct experience in the design of integrated, enterprise-wide information architectures using Commercial-Off-the-Shelf (COTS) and Government-Off-the-Shelf (GOTS) software and hardware solutions in the private or public sector.

Duties/Responsibilities: Plans, designs, oversees deployment of complex enterprise-wide or large scale information architectures including computer hardware and software, operating systems, middleware, communications hardware and software, and security components. Ensures these systems are compatible and in compliance with the standards for open systems architectures as they apply to the implementation and specification of complex information management solutions. Identifies necessary interfaces between enterprise solution applications and legacy IT environments. Supports all program/project planning and milestone development. Supports business case analysis and identification of alternative solutions and resulting business impacts.

#### SENIOR IT CONSULTANT

Education: Possesses a BA/BS degree or higher in Information Systems, Computer Science, Engineering, Business, or related field.

**Experience:** Over eight years' experience consulting on the design of large-scale information technology (IT) projects. This includes over four years of direct experience in the design and development of integrated enterprise-wide Commercial-Off-the-Shelf (COTS) and Government-Off-the-Shelf (GOTS) software and hardware solutions in the private or public sector.

**Duties/Responsibilities:** Senior Information Technology Consultant provides expertise across a broad range of Information Technology disciplines. The Senior IT Consultant provides planning and delivers advice, assistance, guidance, and counseling in support of client's information management and technology development and improvement efforts.

#### **SENIOR PROJECT MANAGER**

**Education:** BA/BS Information Systems, Computer Science, Engineering, Business, or related OR equivalent industry.

**Experience:** Five (5) years of experience developing and leading one or more projects using industry-leading software. Must have at least 1-year experience with Software Acquisition (SA) Capability Maturity Model (CMM).

**Duties/Responsibilities:** Provide enterprise-wide management and direction for problem definition, analysis and requirements development and implementation for very complex systems. Advise on organizational architecture standards and industry best practices. Advise client executive management on emerging technology, system improvements, optimization and maintenance. Create an intra and inter-project relationships which will support detailed analysis and make recommendations that support strategic decisions. Maintain the data structures and activity sets using an IMS tool to accommodate major automated information systems life cycle documentation coding. Communicate project status clearly and concisely, both in oral and written format.

#### **SENIOR SECURITY SYSTEMS ENGINEER**

**Education:** Masters or Advance Degree Equivalent in Computer Science or Engineering with 5 years' experience in the acquisition of military systems.

**Experience:** Seven (7) years applied experience in specific area of expertise including five (5) years of relevant functional experience.

**Duties/Responsibilities:** The Senior Security Systems Engineer is responsible for developing, leading, and overseeing security risk analysis on all systems development; Evaluating trends and establishing advanced integration methodologies; Integrating Systems Security Engineering processes into the system design and development; Reviewing and evaluating the security impact of systems changes, including all interfaces; Providing oversight to ensure adherence to HIPPA requirements, ports & protocols, Encryption requirements; and Ensuring database integrity, audit mechanisms, and utilities. Is also able to execute management and oversight of the military systems and security accreditation process in accordance with the DoDI-8500-series and related policy documents as well as similar documents existing in other Federal Agencies.

#### **SENIOR SOFTWARE APPLICATIONS ENGINEER**

**Education:** BA or BS in Engineering, Computer Science, Information Systems or Business or equivalent and current functional area certifications.

**Experience:** Minimum eight (8) years recent experience in engineering analysis, managing or performing hardware/software engineering activities and current functional area certifications.

**Duties/Responsibilities:** Analyzes and studies complex system requirements. Designs, supports and implements hardware/software tools and subsystems. Manages hardware/software development and support using formal specifications, data flow diagrams, and other accepted design techniques. Reviews existing programs and assists in making refinements, reducing operating time and improving current techniques. Supervises hardware/software configuration management.

#### **SENIOR SOFTWARE ASSET MANAGEMENT ANALYST**

**Education:** Bachelor's Degree in Computer Science or equivalent and current functional area certifications.

**Experience:** Minimum five (5) years' experience with full-life cycle development projects. Experience with warehouse management systems, inventory management systems, order-processing systems and physical asset management systems.

**Duties/Responsibilities:** Formulates/defines specifications for complex applications or modifies/maintains complex existing applications. Develops and directs procedures, programming and documentation related to asset management, Coordinates the installation of software systems and assists other software engineers with understanding of moderately complex systems and applications.

### SENIOR SYSTEMS ARCHITECT

**Education:** BA/BS in Computer Science, Information Systems, Engineering, Business, or other related discipline or equivalent industry experience.

**Experience:** Seven (7) years' experience in the information architecture arena and the development of new applications.

**Duties/Responsibilities:** Lead a team of specialists in developing network, and technical architectures in support of complex and highly sophisticated client/server and mainframe applications. Develop network and technical architectures for complex and highly sophisticated client/server and mainframe applications. Develop and execute architecture strategies, feasibility studies, and integration analyses. Supervise and provide guidance in implementing various architectures. Gather and define the architecture requirements and ensure that the architectures are compatible and in compliance with the appropriate IT organization and project standards.

### SENIOR SYSTEMS ENGINEER

**Education:** Possesses a BA/BS degree or higher in Information Systems, Computer Science, Engineering, Business, or related field.

**Experience:** Over eight years' experience with the design of large-scale information technology (IT) projects. This includes over four years of direct experience in the design of integrated, enterprise-wide information architectures using Commercial-Off-the-Shelf (COTS) and Government-Off-the-Shelf (GOTS) software and hardware solutions in the private or public sector.

**Duties/Responsibilities:** Senior Systems Engineer provides planning, guidance, design, and engineering services on enterprise-wide information technologies. SSE is responsible for computer software and system analysis and design including performance analysis, technical integration, and information technology assessment (including computer hardware and software, operating systems, middleware, communications hardware and software, and security). Has domain knowledge to include analysis, product, and IT systems support and is familiar with the C4ISR Architecture Framework.

### SERVICE DESK ADMINISTRATOR

**Education:** Associates Degree or equivalent experience and/or current functional area certifications.

**Experience:** Minimum one (1) year industry experience and/or current functional area certifications.

**Duties/Responsibilities:** Provides assistance in implementing any new reporting and/or change management initiatives, documenting Standard Operating Procedures, addressing end-user requirements, coordinating and conducting end-user training as needed. Assists with roll outs, newly required implementations, and monitors system utilization. Ensures adequate operation of all Service Desk functions.

### SERVICE DESK ENGINEER

**Education:** Bachelor's Degree or equivalent industry experience and/or current applicable functional area certifications.

**Experience:** Minimum three (3) years industry experience managing a broad range of disciplines, environments, and applications within the enterprise management industry and current functional area certifications.

**Duties/Responsibilities:** Utilizes highest technical skill in effectively managing operations, maintenance and troubleshooting of service desk hardware and software products. Identifies reporting and change management requirements, controls system performance and monitors automated system responses. Provides assistance and recommendation to management and clients on a broad range of business or technical related topics pertaining to the architectural design and development of applied systems and software services.

### SITE DEVELOPMENT ENGINEER

**Education:** BA/BS Information Systems, Computer Science, Engineering, Business, or related discipline or equivalent industry experience.

**Experience:** Three (3) years' experience building & installing web sites, including product selection, configuration, installation, graphics, maintenance, site policy development, administration and training. Experience developing web pages using HTML and associated scripting and graphics integration.

**Duties/Responsibilities:** Design, develop, troubleshoot, and implement software code for a component of an Intranet/Extranet/Internet website with minimal oversight. Work with engineers and other members of a project team to develop site concepts, interface designs, and architecture of the websites. Translate applications

requirements into the design of complex web sites, including integrating web pages and applications to serve either as stand-alone sites or as the front end to web-based applications. Ability to apply new and emerging technologies to the site development process. Apply sound navigational and site-design concepts.

#### **SOFTWARE ADMINISTRATOR**

**Education:** BS or MS degree in Computer Science, Physics, Engineering, Mathematics, or equivalent and current functional area certifications.

**Experience:** Minimum five (5) years' experience using high-level programming languages such as C, Ada, Fortran, and SQL. Experience using object-oriented programming languages such as C++ and Java. Experience in the specification and design of complex software systems including the use of CASE tools and current functional area certifications.

**Duties/Responsibilities:** Analyzes customer needs and develops overall concept and design objectives, Develops specifications, responsible for planning software development program, creates work breakdown structure and schedule, assigns software development team personnel to tasks, responsible for program management and success, tracks resources and expenditures, reviews plan against performance, supervises software development team members' day to day activities, defines and implements get-well plan as necessary, defines software validation/test plan, develops and implement algorithms, performs database design, writes programs, writes software documentation, troubleshoots and debugs computer programs, and performs object-oriented program design.

#### **SOFTWARE APPLICATIONS ENGINEER**

**Education:** Bachelor's degree or equivalent in Computer Science, Information Systems, Engineering, or other related field and current functional area certifications.

**Experience:** Minimum five (5) years' experience in similar field in engineering analysis, managing or performing hardware/software engineering activities and current functional area certifications.

**Duties/Responsibilities:** Designs and develops software by analyzing functional specifications and interpreting system design specifications. Develops functional block diagrams and data/logic flow charts. Codes, integrates, tests, debugs, and refines the software to produce the required product. Develops software tools and subsystems to support software development, test, and reuse, and manages their implementation. Enhances software to reduce operating time or improve efficiency. May manage software development and support. Applies accepted design techniques and CASE tools. Prepares program-level and user-level documentation. Performs software configuration management.

#### **SOFTWARE DEVELOPER**

**Education:** Bachelor's Degree in Computer Science, Engineering or similar technical Degree.

**Experience:** Three (3) years of professional/technical experience

**Duties/Responsibilities:** Perform as a technical expert in the design development, coding, testing, and debugging new software or complex enhancements to existing software. Work with technical staff to understand and to develop resolution of software problems. Resolve customer complaints with software and respond to suggestions for software modifications or enhancements. Participate in the development of software user manuals.

#### **SYSTEMS ADMINISTRATOR I**

**Education:** BA/BS Information Systems, Computer Science, or related discipline or some industry experience.

**Experience:** Two (2) years of experience. Entry-level position with knowledge of computer systems and data communications.

**Duties/Responsibilities:** Works as a team member to provide the following functionality. Can provide system backup/recovery, basic software management, security management, and library management, operating computer systems in different operating environments, sizing, performance, tuning, hardware/software trouble shooting and resource allocation.

#### **SYSTEMS ADMINISTRATOR III**

**Education:** BA or BS in Computer Science, Engineering or other business related discipline or equivalent industry experience.

**Experience:** Five (5) years hands-on technical experience with computer systems and data communications.

**Duties/Responsibilities:** Oversee network operations staff, supervising multiple support operations. Has a thorough understanding of the capabilities of the client's applicable hardware/software configurations. This includes system backup/recovery, basic software management, security management, and library management, operating computer systems in different operating environments, sizing, performance, tuning, hardware/software trouble shooting and resource allocation.

#### **SYSTEMS ANALYST II**

**Education:** Bachelor's Degree in Computer Science, Engineering or similar technical Degree.

**Experience:** Three (3) years of experience in systems development, analysis or design. Requires competence in all phases of system analysis techniques, system design concepts, computer programming languages and the ability to work with end users to develop system designs from end users' specifications.

**Duties/Responsibilities:** The systems analysts will be responsible for performing all manner of program development tasks similar to the programmer. The systems analysts will be expected to perform the more complex programming tasks as well as work with the end users to develop design specifications from end users' requirements. The systems analysts will be expected to translate those tasks to the programmers and to function as a task leader on any given project.

#### **SYSTEMS ENGINEER III**

**Education:** Bachelor's degree in Computer Science, Electrical Engineering, or Electronics Engineering or 400+ hours of continuing education plus four years' general experience in ADP systems design, maintenance, and installation or an equivalent combination of experience, training and education to ensure the specified skill level is required.

**Experience:** Three (3) years' experience or an equivalent combination of experience, training and education to ensure the specified skill level is required.

**Duties/Responsibilities:** Performs complex work involved in specification development, implementation, testing and documenting engineering systems and equipment. Initiates concept development and trade-off studies. Consults extensively with customer representatives and employees. Directs the design of complex electronic or mechanical devices down to the subsystem level. Devises appropriate tests to use in evaluating debugging and checking of equipment and systems for accurate and dependable conformance to specifications.

#### **TASK MANAGER**

**Education:** Bachelor's Degree in Computer Science, Engineering or similar technical Degree.

**Experience:** Five (5) years of technical/professional experience.

**Duties/Responsibilities:** Coordinate schedules, timelines, and related project information. Monitors tasks and advises the Project Manager of any problems, delays, issues, or requirements associated with the task. Provides on-site direction and coordination for all task related development efforts. Responsibilities include identifying new technologies that can be applied to reduce costs, optimize performance, or improve the overall quality of the output-products being developed under the task. May serve as the technical authority for a design area. As a staff specialist or consultant, resolves unique and unyielding systems problems using new technology. May direct systems analysts, programmers and other technical personnel on assigned work.

#### **TECHNOLOGY SPECIALIST**

**Education:** BA/BS in Computer Science, Information Systems, Engineering, Business, or other related discipline or equivalent industry experience.

**Experience:** Possess at least three (3) years of experience in information systems implementation, change management efforts or business process redesign, including experience in premium technologies.

**Duties/Responsibilities:** Possess special skills in premium technologies, such as packaged enterprise software tools and other premium market-driven technologies. Provide direction to project teams and interact with clients at the supervisory level. Qualified to perform tasks such as: (1) Develop functional and technical information system designs; (2) Design training programs for information systems users; (3) Participate in quality reviews to ensure work complies with specified standards; (4) Develop team work plans; (5) Perform workflow analyses; (6) Design and manage databases; (7) Define information systems requirements.

#### **TELECOMMUNICATIONS & NETWORK ENGINEER**

**Education:** Bachelor's Degree in Computer Science, Engineering or similar technical Degree.

**Experience:** Five (5) years of experience in systems development, analysis or design. Requires competence in all phases of system analysis techniques, system design concepts, computer programming languages and the ability to work with end users to develop system designs from end users' specifications.

**Duties/Responsibilities:** The systems analysts will be responsible for performing all manner of program development tasks similar to the programmer. The systems analysts will be expected to perform the more complex programming tasks as well as work with the end users to develop design specifications from end users' requirements. The systems analysts will be expected to translate those tasks to the programmers and to function as a task leader on any given project.

#### TESTER

**Education:** BA/BS Information Systems, Computer Science, Engineering, Business, or related OR equivalent industry

**Experience:** At least three (3) years of experience in technical information technology arena.

**Duties/Responsibilities:** Demonstrated experience and ability to design and execute software tests and evaluate results to ensure compliance with applicable regulations as well as apply understanding of enterprise-wide integration. Ability to prepare test scripts and all required test documentation. Ability to clearly write test plans to include objectives, methodologies, instrumentation requirements, analysis, and test procedure documents. Conducts analysis of output data and provide results and recommendations.

#### VoIP ADMINISTRATOR

**Education:** Associates Degree or equivalent industry experience and/or current functional area certifications.

**Experience:** Minimum one (1) year directly related work experience, and/or all functional area certifications.

**Duties/Responsibilities:** Prepares VoIP technical implementation plans that provide integrated solutions. Maintains overall VoIP system operations, performs necessary phone moves, additions and/or changes, addresses problems and issues with VoIP hardware and software as reported by trouble tickets, and performs periodic system health checks.

#### VoIP ENGINEER

**Education:** Bachelor's Degree in Computer Science or a closely related field or equivalent training and/or functional area certifications.

**Experience:** Minimum three (3) years' experience working on formally structured LAN/WAN projects; 3 years' experience working on formally structured Cisco VoIP projects; Cisco CCNP certification or higher.

**Duties/Responsibilities:** Assists in the development of strategies and architectures for monitoring voice consumption, monitoring capacity constraints, and trending. Participates in projects to analyze, implement, migrate, maintain, troubleshoot, and document network infrastructure systems, software and services. Installs, configures, and manages voice enabled routers, firewalls, network operating systems, and software. Performs system capacity planning to ensure appropriate growth and evolution of the systems. Supports deployment of new platforms, features and code. Configures and maintains SRST, QoS, Voice Routing Protocols, and Voice Gateways. Maintains efficient and trouble-free operation of all local and remote data communications. Maintains up-to-date documentation of network design, operation and procedure manuals. Provides Tier III Support in response to trouble tickets.

#### VoIP SENIOR ENGINEER

**Education:** Bachelor's Degree in Computer Science or a closely related field or equivalent training and/or functional area certifications.

**Experience:** Minimum five (5) years' experience working on formally structured LAN/WAN projects; 3 years' experience working on formally structured Cisco and other VoIP Vendor's projects; Cisco CCNP certification or equivalent or higher.

**Duties/Responsibilities:** Develops strategies and architectures for monitoring voice consumption, monitoring capacity constraints, and trending. Manages and/or participates in projects to analyze, implement, migrate, maintain, troubleshoot, and document network infrastructure systems, software and services. Installs, configures, and manages voice enabled routers, firewalls, network operating systems, and software. Performs system capacity planning to ensure appropriate growth and evolution of the systems. Supports deployment of new platforms, features and code. Configures and maintains SRST, QoS, Voice Routing Protocols, and Voice Gateways. Maintains efficient and trouble-free operation of all local and remote data communications. Maintains up-to-date documentation of network design, operation and procedure manuals.

### VTC ADMINISTRATOR

**Education:** Associates Degree or equivalent industry experience and/or current functional area certifications

**Experience:** Minimum one (1) year experience working with the technologies surrounding video-conferencing. Solid experience with local (LAN) and wide area networks (WAN), including ISDN as it relates to video-teleconferencing (VTC). Must possess functional area certifications.

**Duties/Responsibilities:** Serves as VTC Subject Matter Expert, prepares equipment and project status reports, coordinates day-to-day tasks in support of VTC, assists in the creation of documentation for integration, installation manuals, test plans and detailed drawings of component wiring and signal paths, assists in the development of strategies for new VTC technologies, Sustains VTC equipment, and improves asset management

### VTC SENIOR ENGINEER

**Education:** Bachelor of Science or equivalent industry experience and current functional area certifications.

**Experience:** Minimum five (5) years industry experience and current functional area certifications to include Certified VTC Engineer (CVE).

**Duties/Responsibilities:** Analyzes requirements and determines the best technical solution(s) with specifications of video components and system integration techniques to satisfy requirements for complex design and technology activities consisting of, but not limited to; video distribution and teleconferencing design and test efforts. Must possess detailed knowledge of video technology (video generation, distribution, and display) and current ANSI/IEEE format for both analog and digital systems, and their deployment (broadband cable, NTSC or HDTV baseband, ISDN, etc.). Must be able to execute good engineering practices that detail the overall system architecture, detailed line (with breakdown of signal and test point values) and rack elevation drawings, and to/from cable list.

### VTC TECHNICIAN

**Education:** Associates Degree or equivalent industry experience and/or current functional area certifications

**Experience:** Minimum of three (3) years of "hands on" work experience in support of installation, repair, and troubleshooting or maintenance of communications systems and/or equipment.

**Duties/Responsibilities:** Uses expert knowledge and understanding of the interrelationships of circuits to exercise independent judgment in performing tasks in support of communications systems and/or equipment. Assists in the Planning, coordination and scheduling of video teleconferences, updates and maintains VTC equipment.

## TERMS AND CONDITIONS APPLICABLE TO HEALTH INFORMATION TECHNOLOGY (IT) SERVICES (SPECIAL ITEM NUMBER 54151HEAL)

Vendor suitability for offering services through the new Health IT SIN must be in accordance with the following laws and standards when applicable to the specific task orders, including but not limited to:

- Health Information Technology for Economic and Clinical Health Act of 2009 (HITECH)
- The Health Insurance Portability and Accountability Act of 1996 (HIPAA)
- National Institute of Standards and Technology (NIST) Federal Information Processing Standards (FIPS) and Special Publications
- Federal Information Security Management Act (FISMA) of 2002

### 1. SCOPE

- a. The labor categories, prices, terms and conditions stated under Special Item Number 54151HEAL Health Information Technology Services apply exclusively to Health IT Services within the scope of this Information Technology Schedule.
- b. This SIN is limited to Health IT Services only. Software and hardware products are out of scope. Hardware and software can be acquired through different Special Item Numbers on IT Schedule 70 (e.g. 132-32, 132-33, 132-8).
- c. This SIN provides ordering activities with access to Health IT services.
- d. Health IT Services provided under this SIN shall comply with all Healthcare certifications and industry standards as applicable at the task order level.
- e. 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. ORDER

- a. 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 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.

### 3. PERFORMANCE OF SERVICES

- a. The Contractor shall commence performance of services on the date agreed to by the Contractor and the ordering activity. All Contracts will be fully funded.
- 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 Health IT 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.

#### 4. INSPECTION OF SERVICES

In accordance 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.

#### 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.

#### 5. RESPONSIBILITIES OF THE ORDERING ACTIVITY

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

#### 6. INDEPENDENT CONTRACTOR

All Health IT 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.

#### 7. 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.

#### 8. INVOICES

The Contractor, upon completion of the work ordered, shall submit invoices for Health 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 services performed during the preceding month.

#### 9. RESUMES

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

## 10. INCIDENTAL SUPPORT COSTS

Incidental support costs are not considered part of 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.

## 11. 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.

## 12. DESCRIPTION OF HEALTH IT SERVICES AND PRICING

a. The Contractor shall provide a description of each type of Health IT Service offered under Special Item Numbers 54151HEAL Health IT Services 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.

b. Pricing for all Health IT 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.

The following is an example of the manner in which the description of a commercial job title should be presented:

EXAMPLE: Commercial Job Title: Health IT Subject Matter Expert

Minimum Experience: Ten (10) years.

Functional Responsibilities: Significant information technology consulting and clinical information system strategy and implementation experience. Experienced in client engagements representing a wide array of activities, related to professional information technology projects, in a healthcare/clinical environment, including strategic planning related to information technology systems and/or software, governance, process design/ redesign, clinical content development, and communications and training strategies for information technology solutions.

Minimum Education: Medical Doctor or Doctor of Osteopathic Medicine.

## HEALTH IT LABOR CATEGORY DESCRIPTIONS - 54151HEAL

### HEALTH IT BUSINESS SUBJECT MATTER SPECIALIST

Education: BA/BS Degree in Healthcare Administration, Information Systems, Computer Science, Engineering, Business, or related discipline or 5 years of equivalent industry experience.

Experience: 3-5 years' experience in providing functional expertise in solutions development with emphasis on analysis, design and implementation

Duties/Responsibilities: Significant information technology consulting and clinical information

system strategy. Experienced in client engagements representing a wide array of activities, related to professional information technology projects, in a healthcare/clinical environment, including strategic planning related to information technology systems and/or software. Provides technical knowledge and analysis of highly specialized applications and operational environments, high-level functional systems analysis, design, integration, documentation and implementation advice on exceptionally complex problems that need extensive knowledge of the subject matter for effective implementation. Participates as needed in all phases of software development with emphasis on the planning, analysis, testing, integration, documentation, and presentation phases.

### HEALTH IT PROJECT MANAGER SENIOR

**Education:** BA/BS Degree in Healthcare Administration, Information Systems, Computer Science, Engineering, Business, or related discipline or is a certified Project Management Professional with 6 years of equivalent industry experience

**Experience:** 4-6 years' experience with the execution and management of mid-large scale Information Technology programs.

**Duties/Responsibilities:** Supports all compliance activities related to state, federal regulatory requirements, healthcare accreditation standards and all other applicable regulations that govern the use and disclosure of patient, financial or other confidential information. Responsible for all aspects of the development and implementation of assigned projects and provides a single point of contact for those projects. Takes projects from original concept through final implementation. Interfaces with all areas affected by the project including end users, computer services, and client services. Defines project scope and objectives. Develops detailed work plans, schedules, project estimates, resource plans, and status reports. Conducts project meetings and is responsible for project tracking and analysis. Ensures adherence to quality standards and reviews project deliverables. Manages the integration of vendor tasks and tracks and reviews vendor deliverables. Provides technical and analytical guidance to project team. Recommends and takes action to direct the analysis and solutions of problems.

#### **HEALTH IT BUSINESS PROCESS (BP) CONSULTANTS**

**Education:** BA/BS Degree in Healthcare Administration, Information Systems, Computer Science, Business, or related discipline.

**Experience:** 2-4 years of relevant experience with demonstrated expertise in the functional areas of Resource Management, Human Resources, Logistics, Information Management or Program Management.

**Duties/Responsibilities:** Defines business requirements, understands general business issues and data requirements for healthcare client organizations and the health IT industry. Reviews and edits requirements, specifications, business processes and recommendations related to proposed design solutions. Interacts with client and project management in these activities. Responsible for complying with healthcare quality and documentation standards. Ability to understand and apply analytical skills to support process improvement, studies and analysis projects. Typical duties include analysis, planning, establishment of requirements, functional modeling, development of procedures, development of functional architectures, and other related management and technical duties.

#### **HEALTH IT WEB PROJECT MANAGER**

**Education:** BA/BS Degree in Health Informatics, Web Design, Information Systems, Computer Science, Business, or related discipline or is a certified Project Management Professional with 4 years of equivalent industry experience

**Experience:** 2-4 Years of experience with the execution and management of mid-large scale web projects.

**Duties/Responsibilities:** Serves as project manager of a development team responsible for planning, developing, and deploying websites including preparation of text, graphics, audio, and video for web pages. Works directly with partners and clients to determine project scope and specifications. Projects may include those relating to connected health, electronic health records, health information exchanges, health analytics, personal health information management, innovative Health IT solutions, health informatics, emerging Health IT research, or other Health IT services. Coordinates the work of design and development teams to implement online designs. Reviews progress, manages resources, and ensures overall quality of completed website. Typically requires experience in management and understanding of web technologies.

#### **HEALTH IT DATA ARCHITECT**

**Education:** BA/BS Degree in Health Informatics, Web Design, Information Systems, Computer Science, Business, or related discipline.

**Experience:** 3-5 years' experience in the data architecture arena and the development of new databases and/or data warehouses

**Duties/Responsibilities:** Leads and performs complex analysis in development and operational contexts for healthcare environments. Designs and builds relational databases. Develops strategies for data acquisitions, archive recovery, and implementation of a database. Works in a data warehouse environment, which includes data design, database architecture, metadata and repository creation. Translates business needs into long-term architecture solutions. Defines, designs, and builds dimensional databases. Develops data warehousing blueprints, evaluating hardware and software platforms, and integrating systems. Evaluates reusability of

current data for additional analyses. Reviews object and data models and the metadata repository to structure the data for better management and quicker access.

#### HEALTH IT ENGINEERING SUBJECT MATTER EXPERT

Education: BA/BS Degree in Health Informatics, Information Systems, Computer Science, Engineering, or related discipline

Experience: 3-5 years' experience with software/application development with emphasis on analysis, design and implementation

Duties/Responsibilities: Provides technical knowledge and analysis of highly specialized health applications and healthcare operational environment, high-level functional health systems analysis, design, integration, documentation, and implementation advice on exceptionally complex healthcare-related problems that necessitate high-level knowledge of the subject matter for effective implementation. Participates as needed in all phases of software development with emphasis on the planning, analysis, modeling, simulation, testing, integration, documentation and presentation phases.

#### HEALTH IT TECHNICAL WRITER II

Education: BA/BS Degree in Healthcare Administration, Communication or related field of expertise.

Experience: 3+ years of relevant experience in writing and/or editing technical documents, researching and gathering technical and background information.

Duties/Responsibilities: Duties include researching protocols, scientific progress reports, grant proposals, medical and scientific journal articles. Assist in writing and/or editing technical documents, including business proposals, reports, user manuals, briefings and presentations, functional descriptions, system specifications, guidelines, special reports, and other project deliverables to meet contract requirements. Develop outlines and drafts for review and approval by technical specialists and project management ensuring that final documents meet applicable contract requirements and regulations. Research and gather technical and background information for inclusion in project documentation and deliverables. Consult relevant information sources, including library resources, technical and financial documents, and client and project personnel, to obtain background information, and verify pertinent guidelines and regulations governing project deliverables.

#### HEALTH IT ADMINISTRATIVE ASSISTANT

Education: High School Degree and Education towards Health Services

Experience: 1 year providing similar administrative services

Duties/Responsibilities: Demonstrated experience in filing techniques (clinical record forms into client/patient charts), administrative typing, and using word processing equipment. Experience with computer graphics or computer terminals can be used as substitute for experience with word processing equipment. Duties may include preparing and editing technical or general documentation using various software packages such as Microsoft Word, Microsoft PowerPoint, Microsoft Excel and Windows, transcription of documents, data entry, and preparing and editing management support documentation such as PERT or GANTT charts in hard copy or using software such as Microsoft Project or Primavera. Duties may also include performing a variety of support services such as visitor access control, answering telephones, receptionist, ordering and receiving office supplies and equipment, editing or maintaining technical, budget, programmatic and administrative documentation and references, preparing travel documentation and coordinating travel arrangements, operation of reproduction equipment to produce large volumes of documents, courier service and mail service, etc. May be required to interact with senior level managers such as high level military and civilian medical, health care and technical personnel. High skill personnel may also have duties such as coordinating and directing a variety of support services such as use of reproduction equipment, scheduling maintenance for equipment, scheduling courier runs, ensuring approved security practices are applied relative to personnel and document control and scheduling, ensuring efficient operation of conference facilities and efficient conduct of office operations.

#### HEALTH IT PAO ASSISTANT

Education: Bachelor's Degree in Healthcare Administration, Healthcare Management, or Education, Journalism, Technical Writing, Communications, or related field

Experience: 2 Years' experience in management, operational, and financial solutions/techniques.

Duties/Responsibilities: Assists with the incorporation of innovative healthcare management, operational, and financial techniques that result in increased healthcare delivery productivity and sustained organizational growth. Ability with assisting in finding solutions to a myriad of healthcare issues and problems. Excellent oral

and written communicator with good interpersonal skills. Experienced with office suite of computer software applications.

#### HEALTH IT PMO PROJECT MANAGER

Education: Bachelor's Degree in Healthcare Administration, Healthcare Management, Information Systems, Computer Science, Business, or related field

Experience: 2 Years' Experience in planning and production of all activities in technical health IT areas.

Duties/Responsibilities: Demonstrated experience and ability to oversee and orchestrate and performs day-to-day management of assigned health IT and healthcare delivery order projects that involve teams of consultants and functional health experts and analyst. Demonstrates proven skills in those technical health IT areas addressed by the delivery order to be managed. Organizes, directs, and coordinates the planning and production of all activities associated with assigned delivery order projects, including assessment of staff and expenditure of ODCs. Demonstrates writing and oral communication skills.

#### HEALTH IT STAFF WRITER

Education: Bachelor's Degree in Healthcare Administration, Healthcare Management, or Education, Journalism, Technical Writing, Communications, or related field

Experience: 2 Years' Experience in writing and/or editing technical documents, researching and gathering technical and background information

Duties/Responsibilities: Identifies, explains and analyzes innovation in healthcare for an international/external audience that span key opinion leaders in the scientific, business, investment, government and patient communities. Assists with the incorporation of innovative management, operational, and financial techniques that result in increased productivity and sustained organizational growth. Ability with assisting in finding solutions to a myriad of business issues and problems. Excellent oral and written communicator with good interpersonal skills. Experienced with office suite of computer software applications.

#### HEALTH IT LEADERSHIP CONSULTANT

Education: Ph.D. in Healthcare Management, Psychology, Business, Human Relations, Organizational Behavior or related field

Experience: 10 Years (Alternate qualification: advanced degree in above fields and at least 12 years' experience in the information systems field).

Duties/Responsibilities: Supports the healthcare consulting practice through completing hospital and health system strategic planning and programming projects. Must possess a Ph.D. in a scientific or information systems field and at least 10 years' experience in the information systems/software engineering/system engineering field. Must be experienced with and familiar with current research and/or standards in at least three of the following technology standard areas: POSIX, GOSIP, GUI, Ada/4GL, CASE, object oriented technologies, OPENbus, DBMS, SQL, IRDS (repository), ODA/ODIF, CALS/EDI, DCE, simulation and modeling, automated systems security, software metrics/system effectiveness measures/tools, multimedia, OLTP, distributed computing, and process/data/BCA modeling methods and tools. Alternate qualification: advanced degree in above fields and at least 12 years' experience in the information systems field.

#### HEALTH IT PROGRAM MANAGER

Education: Master's Degree in Engineering, Computer Science, Systems, Business or related scientific /technical discipline and/or is a certified Project Management Professional.

Experience: Over (10) ten years' experience with the execution and management of largescale programs. This includes over six years of direct experience in leading and executing enterprise-wide solutions in the private or public sector. Experience managing technically and functionally diverse and complex programs and implementing detailed management.

Duties/Responsibilities: Demonstrated experience and comprehensive knowledge of several IT Health related fields, and recognition as a leader. Experience managing the activities of a group of management, organizational ability to direct multiple activities of a group of management, organizational and business process improvement staff to execute the business plans, developing plans and projects (projects may include those relating to connected health, electronic health records, health information exchanges, health analytics, personal health information management, innovative Health IT solutions, health informatics, emerging Health IT research, or other Health IT services), determining needs, investigating and resolving problems, interfacing with other functions and outside personnel, preparing capital and operating requests, and managing staff. Should be

able to act as senior resource for a specific discipline or function. Ability to organize and direct work, coordinate efforts with other functions, and direct personnel to achieve objectives. Directly supervises contractor employees. Responsible for interviewing, hiring, and training contractor employees. Responsible for staff development, planning, assigning and directing work. Responsible for addressing complaints and resolving problems.

#### HEALTH IT BUSINESS ANALYST

**Education:** A Bachelor's Degree in Operations Research, Mathematics, Computer Science, Cost Accounting or related scientific or technical discipline.

**Experience:** 5 years' experience -- 8 years of additional relevant experience may be substituted for education

**Duties/Responsibilities:** Lead analyst on development and implementation of a health system's program. Identifies, procures, structures, analyzes, and integrates a range of data sets relevant to predicting and analyzing health care costs. Identify, procure, structure, analyze, and potentially integrate a range of data sets relevant to predicting and analyzing health care costs. Demonstrated ability to apply analytical skills in development and implementation of functional areas process improvement activities, studies, policies and procedures in the functional areas of Human Resources, Medical, Reserve Finance, Procurement, Materiel Management, or C3I. Requires technical expertise to perform management work such as: Data Management, Business Management/Program Control, Cost Variance Analysis, General Management and Procurement.

#### HEALTH IT CLINICAL SME

**Education:** BA/BS Degree in Health Informatics, Information Systems, Computer Science, Engineering, Business, or related discipline or equivalent industry experience.

**Experience:** Ten (10) years of hands-on specialty or healthcare practice experience, ability to apply concepts in information technology to the management & processing of data, information and knowledge in health care delivery. Have demonstrated ability in the representation of user requirements (systems analysis) for at least one major medical system.

**Duties/Responsibilities:** Applies clinical expertise to the multimedia instructional design tasks in support of goals for our client. Demonstrated experience and ability to confer with client executive management using industry expertise to define the client's strategic enterprise information technology business goals, and advises in the reengineering of high level business processes to meet these goals. Demonstrated experience and ability to analyze extremely complex client requirements and recommend sophisticated development or acquisition strategies. Demonstrated experience and ability to assist client in developing strategic plans and concepts. Demonstrated experience and ability to advise client on the impact of new legislation and emerging technologies that are relevant to their activity. Demonstrated experience and ability to effectively communicate, both orally and in writing.

#### HEALTH IT RESEARCH ANALYST

**Education:** Bachelor's Degree in Healthcare Management, Health Informatics, Operations Research, Mathematics, Computer Science, Cost Accounting or related scientific or technical discipline

**Experience:** 2-4 years of relevant experience in researching and gathering technical information in clinical information systems.

**Duties/Responsibilities:** Works with clinical information systems or system implementation teams for complex projects and/or application development. Serves as the Contractor's Task Manager, and may be the Contractor's authorized point of contact with the Government Task Manager. Under the guidance of the Program Manager, responsible for the overall management of a specific Call Order, or, in the case of particularly complex Call Orders, responsible for management of a Call Order Task under the guidance of the Call Order Government Task Manager. Interfaces with Government management personnel, contract managers, and customer agency representatives. Responsible for formulating and enforcing work standards, assigning Contractor schedules, reviewing work quality, communicating policies, purposes, and goals of the organization to subordinates.

#### HEALTH IT TASK MANAGER

**Education:** BA/BS Degree or higher in Healthcare Administration, Healthcare Management, Information Systems, Computer Science, Engineering, Business, or related field and/or is a certified Project Management Professional.

**Experience:** Three (3) years of technical/professional experience in formulating and enforcing work standards.

**Duties/Responsibilities:** Serves as the Contractor's Task Manager, and may be the Contractor's authorized point of contact with the Government Task Manager. Under the guidance of the Program Manager, responsible for the

overall management of a specific healthcare or Health IT related Call Order, or, in the case of particularly complex health-related Call Orders, responsible for management of a Call Order Task under the guidance of the Call Order Government Task Manager. Interfaces with Government management personnel, contract managers, and customer agency representatives. Responsible for formulating and enforcing work standards, assigning Contractor schedules, reviewing work quality, communicating policies, purposes, and goals of the organization to subordinates. The Task Manager may also have demonstrated capability in the overall management of complex tasks, and strong team building skills.

#### HEALTH IT SOCIAL MEDIA MANAGER

Education: Bachelor's Degree in Healthcare Administration, Healthcare Management, communications, journalism, marketing, or related field

Experience: 3-5 years of experience in professional writing, marketing/public affairs exposure

Duties/Responsibilities:

- Plan and manage the publishing calendar, social objectives, messaging, writing posts, sourcing or creating the visual images for clinical/health IT applications and systems, aligning to the overall clinical product and healthcare marketing plan
- Serve as main point of contact for editorial/media for clinical applications and health campaigns
- Manage day-to-day reactive and proactive communications on all health social media channels
- Provide insights behind social media channel metrics and traffic. Create monthly / quarterly social media learnings/insights ensuring clear insights/actions is the focus, rather than just data that rolls up to global reports.
- Monitor social healthcare trends and conversations to understand what our healthcare customers are saying in the social space, and share that understanding with the entire team to drive decision making for health marketing campaigns
- Review and monitor competitive brands in similar health communities
- Grow engagement, reach, and impact through proactive health campaigns and management
- Help with roll out of social advocacy tool and be first point of contact as well as providing training, and acting as first point of contact and advocate for usage of tool within other teams

#### HEALTH IT PROJECT MANAGER

Education: BA/BS Degree or higher in Healthcare Administration, Healthcare Management, Information Systems, Computer Science, Engineering, Business, or related field and/or is a certified Project Management Professional.

Experience: Over (5) five years' experience with the execution and management of largescale Information Technology programs. This includes over two years of direct experience in managing enterprise-wide IT projects in the private or public sector.

Duties/Responsibilities: Supports a large, complex healthcare projects (or a group of healthcare projects).

Assists the Program Manager in working with the customer and customer contract personnel. Demonstrated experience and ability to oversee and orchestrate and performs day-to-day management of assigned delivery order projects that involve teams of consultants and functional experts and analyst. Demonstrates proven skills in those technical areas addressed by the delivery order to be managed. Organizes, directs, and coordinates the planning and production of all activities associated with assigned delivery order projects, including assessment of staff and expenditure of ODCs. Demonstrates writing and oral communication skills.

#### HEALTH IT PROJECT MANAGER - SR.

Education: BA/BS Degree or higher in Healthcare Administration, Healthcare Management, Information Systems, Computer Science, Engineering, Business, or related field and/or is a certified Project Management Professional.

Experience: Seven (7) years of professional/technical experience and Three (3) years' experience in Project Management specialization in healthcare systems.

Duties/Responsibilities: Supports a large, complex healthcare projects (or a group of healthcare projects).

Assists the Program Manager in working with the customer and customer contract personnel. Demonstrated experience and ability to manage individual advanced technology system design, prototyping, development, integration, testing, training, deployment, operation and/or maintenance tasks. Ability to present system designs for user approval at formal reviews. Ability to perform configuration management, software integration, and interpretation of software test results, as well as recommending solutions for unsatisfactory test results. Ability to provide solutions to identified software problem reports. Performs day-to-day management of highly technical tasks, working with other data processing or information system and management professionals. Demonstrates proven skills in the advanced technology areas addressed by the task to be managed. Plans, organizes, coordinates and executes all activities associated with assigned task. Demonstrates writing and oral communication skills.

#### HEALTH IT TASK MANAGER II

Education: BA/BS Degree or higher in Healthcare Administration, Healthcare Management, Information Systems, Computer Science, Engineering, Business, or related field and/or is a certified Project Management Professional.

Experience: Five (5) years of technical/professional experience

Duties/Responsibilities: Serves as the Contractor's Task Manager, and may be the Contractor's authorized point of contact with the Government Task Manager. Under the guidance of the Program Manager, responsible for the overall management of a specific healthcare or Health IT related Call Order, or, in the case of particularly complex health related Call Orders, responsible for management of a Call Order Task under the guidance of the Call Order Government Task Manager. Interfaces with Government management personnel, contract managers, and customer agency representatives. Responsible for formulating and enforcing work standards, assigning Contractor schedules, reviewing work quality, communicating policies, purposes, and goals of the organization to subordinates. The Task Manager may also have demonstrated capability in the overall management of complex tasks, and strong team building skills.

#### HEALTH IT TRAINING MANAGER

Education: Bachelor's Degree in Healthcare Administration, Healthcare Management, Health Informatics, Education, human resources, business administration, or related field

Experience: 3-5 Years of experience developing and deliver training courseware.

Duties/Responsibilities: Gather requirements, develop, and deliver Health information technology related training to customers. Demonstrated experience and ability to provide daily supervision and direction to a staff of training personnel. Ability to assess training needs and design and manage Information System and/or Automated Data Processing subject matter training classes. Works closely with Government personnel to determine training and scheduling requirements. Responsible for the development, quality and adequacy of course material. Reviews and provides inputs for training documentation. Ability to develop and prepare user and technical documentation and training course materials for computer based training as well as classroom instruction, training instruction, writing and editing technical documents, and knowledge of information systems. Duties may include daily supervision and direction for personnel providing training development and instruction.

#### HEALTH IT HELP DESK SUPPORT SERVICES SPECIALIST - SENIOR

Education: High School Diploma or GED

Experience: 3 years of PC software and troubleshooting experience.

Duties/Responsibilities:

- Ability to use ticket tracking system such as Remedy to access assigned tickets and close them.
- Able to perform computer trouble shooting and setup process requiring multiple detailed processes and procedures within a clinical or healthcare environment.
- Able to remember multiple cascading memory choices (minimum 3) to configure computer software. Each step/choice may have multiple options for configuration and may require complex keyboard command entries.
- Must be able to write/document detailed trouble shooting in a clinical environment and on clinical/healthcare related systems results in help desk ticket tracking.
- Able to pull log files from clinical systems and send them to Tier 3 support for further diagnosis.
- Must be able to multi-task 3-5 concurrent computer support activities with detailed processes.
- Must be able to recall from memory in a timely manner established computer support techniques.
- Ability to perform internet searches for computer break fix processes and software upgrades.
- Experience with remote access software, Office Automation Software Suites and a high level of expertise with Operating Systems and Networking is a must.

- Demonstrated ability to communicate effectively, both written and orally, among the customers base and Help Desk management within a healthcare or clinical environment.
- Major experience working with PC software and troubleshooting required.

#### HEALTH IT HELP DESK SPECIALIST

Education: High School Diploma or GED

Experience: 1 years of PC software and troubleshooting experience.

Duties/Responsibilities: Required experience:

- Ability to use ticket tracking system such as Remedy to access assigned tickets and close them.
- Able to perform computer trouble shooting and setup process requiring multiple detailed processes and procedures within a clinical or healthcare environment.
- Able to remember multiple cascading memory choices (minimum 3) to configure computer software. Each step/choice may have multiple options for configuration and may require complex keyboard command entries.
- Must be able to write/document detailed trouble shooting in a clinical environment and on clinical/healthcare related systems results in help desk ticket tracking.
- Able to pull log files from clinical systems and send them to Tier 3 support for further diagnosis.
- Must be able to multi-task 3-5 concurrent computer support activities with detailed processes.
- Must be able to recall from memory in a timely manner established computer support techniques.
- Ability to perform internet searches for computer break fix processes and software upgrades.
- Experience with remote access software, Office Automation Software Suites and a high level of expertise with Operating Systems and Networking is a must.
- Demonstrated ability to communicate effectively, both written and orally, among the customers base and Help Desk management within a healthcare or clinical environment.

#### HEALTH IT NETWORK ENGINEER - SENIOR

Education: A Bachelor's Degree in Health Informatics, Computer Science, Information Systems, Engineering, Business, or other related discipline is required

Experience: 5 years of experience in development of enterprise-wide or large-scale networking infrastructure.

Duties/Responsibilities: Establishes Network information requirements for clinical and healthcare environments and systems using analysis of the Network engineer(s) in the development of enterprise-wide or large-scale networking infrastructure (CAN, MAN, WAN). Demonstrated ability to supervise operations and maintenance activities for voice and data clinical communications networks. Ability to conduct protocol analysis and knowledge of LAN and WAN data communications protocols (TCP/IP, ATM, frame relay, X.400, and X.500). Ability to plan and perform fault management, configuration control, and performance monitoring of clinical systems and networks. Ability to conduct activation, back-up, deactivation, and restart of network resources/services. Ability to evaluate communication hardware and software, troubleshoot LAN/MAN/WAN and other network-related problems. Performs and supervises general voice and data network administration, provides technical leadership in the integration and testing of complex large-scale clinical networks. Schedules network conversions and cutovers, and supervise maintenance of network systems. Coordinates with users, technical team, and senior management throughout all regional sites.

#### HEALTH IT SYSTEMS ENGINEER (EM)

Education: A Bachelor's Degree in Health Informatics, Computer Science, Information Systems, Engineering, Business, or other related scientific or technical discipline.

Experience: 5 years' experience with data migration, data validation, and updates on a Health IT project.

Duties/Responsibilities: Experience with data migration, data validation, and updates on a Health IT project. Health IT projects may include those relating to connected health, electronic health records, health information exchanges, health analytics, personal health information management, innovative Health IT solutions, health informatics, emerging Health IT research, or other Health IT services. Remote management, monitoring, and visibility to assets throughout the customer's environment utilize tools such as, but not limited to, Microsoft System Center Configuration Manager, Remedy, DameWare, ACAS, and SYSMAN to provide desktop, laptop, and server asset inventory, remote control capabilities, and software and patch deployment.

- Creation and deployment of customized packages to meet clinical requirements and remediate security vulnerabilities.
- Customized reporting capability will be required to provide enhanced insight into the clinical environment to improve decision-making and life-cycle management.
- Provide clinical infrastructure management and monitoring capabilities to include the

server, network (wired and wireless), and virtualization environments to provide proactive monitoring and alert notifications of mission critical assets.

- Design, implement, and support other enterprise level applications to include, but not limited to, net-centric mass-notification systems, enterprise log collection, and asset portfolio management.
- Support, maintain, and upgrade the operating systems, patching packages, and hardware upgrades.
- Build automation into daily processes, including server builds, patching, and configuration analysis
- Manages all tasks related to Enterprise Management products, and other Information Assurance (IA) compliance and remediation tools.
- Strong Working knowledge of AD, GPO, Microsoft Server and Desktop operating systems able to edit registry and system configurations through automated solutions

### HEALTH IT SYSTEMS ENGINEER (EM) ADMINISTRATOR

**Education:** A Bachelor's Degree in Health Informatics, Computer Science, Information Systems, Engineering, Business, or other related scientific or technical discipline.

**Experience:** 2-3 years' experience in systems analysis and design techniques for Health technology systems.

**Duties/Responsibilities:** Experience in systems analysis and design techniques for Health technology systems.

Remote management, monitoring, and visibility to assets throughout the customer's environment utilize tools such as, but not limited to, Microsoft System Center Configuration Manager, Remedy, DameWare, ACAS, and SYSMAN to provide desktop, laptop, and server asset inventory, remote control capabilities, and software and patch deployment.

- Creation and deployment of customized packages to meet clinical requirements and remediate security vulnerabilities.
- Customized reporting capability will be required to provide enhanced insight into the clinical environment to improve decision-making and life-cycle management.
- Provide clinical infrastructure management and monitoring capabilities to include the server, network (wired and wireless), and virtualization environments to provide proactive monitoring and alert notifications of mission critical assets.
- Design, implement, and support other enterprise level applications to include, but not limited to, net-centric mass-notification systems, enterprise log collection, and asset portfolio management.
- Support, maintain, and upgrade the operating systems, patching packages, and hardware upgrades.
- Build automation into daily processes, including server builds, patching, and configuration analysis
- Manages all tasks related to Enterprise Management products, and other Information Assurance (IA) compliance and remediation tools.
- Strong Working knowledge of AD, GPO, Microsoft Server and Desktop operating systems able to edit registry and system configurations through automated solutions

### HEALTH IT WEB CONTENT ADMINISTRATOR

**Education:** A Bachelor's Degree in Healthcare Administration, Healthcare Management, Health Informatics, Computer Science, Information Systems, Engineering, Business, or other related scientific or technical discipline

**Experience:** 2-3 years' experience in creating functional and technical specifications, test plans, and system and user documentation.

**Duties/Responsibilities:** The Web Content Administrator position will provide senior level configuration support, administration, configuration, and development of SharePoint Sites to support clinical operations and clinical knowledge management. This includes intranet and internet portals, extranets, and team sites for healthcare departments and clinics. The Administrator will also be responsible for the managing SharePoint governance and site managers. The SharePoint Administrator will work with infrastructure and application development staff toward the development of clinical web applications and communications accessed from the SharePoint portals. This includes documenting requirements as well as creating functional and technical specifications, test plans, and system and user documentation. The candidate will also recommend updates and enhancements to SharePoint sites along with any related tools and supplemental web parts used throughout the production life cycle.

### HEALTH IT WEB PROJECT MANAGER - SENIOR

**Education:** A Bachelor's Degree in Healthcare Administration, Healthcare Management, or Health Informatics, Computer Science, Information Systems, Engineering, Business, or other related scientific or technical discipline

Experience: 5 years' experience in interface implementation, web integration applications, and backend databases

Duties/Responsibilities: Designs, develops, troubleshoots, debugs, and implements software code (such as HTML, CGI, and JavaScript) for a clinical or healthcare related component of the website. Works with graphic designers and other members of a project team to develop the site concept, interface design, and architecture of the website. Responsible for interface implementation. Integrates web applications with backend databases. Deploys large web-based medical transaction systems using application servers. Researches, tests, builds, and coordinates the integration of new medical products per production and client requirements. Requires strong navigation and site-design instincts.

#### HEALTH IT APPLICATIONS SYSTEMS ANALYST / PROGRAM MANAGER

Education: A Bachelor's Degree in Healthcare Administration, Healthcare Management, or Health Informatics, Computer Science, Information Systems, Engineering, Business, or other related scientific or technical discipline

Experience: 5 years' experience in system operation and resource utilization, system optimization, analysis and planning.

Duties/Responsibilities: Conduct analysis for the best industry practices, research and development in the Health IT areas. Health IT projects may include those relating to connected health, electronic health records, health information exchanges, health analytics, personal health information management, innovative Health IT solutions, health informatics, emerging Health IT research, or other Health IT services. Senior Systems Administrator - Supervises and manages the daily activities of configuration and operation of business systems which may be mini or client/server based. Optimizes system operation and resource utilization, and performs system capacity analysis and planning. Provides tier 3 assistance to users and assistance accessing what business systems are suitable for their environment.

#### HEALTH IT INFORMATION ASSURANCE ENGINEER SENIOR

Education: A Bachelor's Degree in Cybersecurity, Health Informatics, Computer Science, Information Systems, Engineering, Business, or other related scientific or technical discipline

Experience: 5 years' experience in security assessments, certification development, and accreditation plans.

Duties/Responsibilities: Perform IT security assessments and develop certification and accreditation plans for clinical systems and healthcare organizations.

- Assist medical treatment facilities with conversion from DIACAP to RMF. Provide map and gap of sites from DIACAP to RMF and uploading into eMASS.
- Provide technical, administrative direction, and review for Information Assurance (IA) and security controls as it pertains to RMF.
- Identify industry accepted standards, IT standards, and medical standards for validated data, access control, roles definition, authentication methods and apply to existing clinical and medical systems.
- Review, analyze existing systems, identify and understand business rules and technical requirements as part of strategic development, implementation, and support for an IA Practice.
- Contribute to research and analysis, and translate security policy and requirements to define best methods and practices within a medical environment.
- Provide technical guidance on implementation of security mechanisms and controls on medical systems and operational environments.
- Develop System Security documentation, including FIPS-199 determination, e-Authentication, privacy threshold analysis, privacy impact assessment, system security plans (SSP), IA policies, Rules of Behavior, security test and evaluation (ST&E) plans, risk assessment plans and reports, business continuity plans, disaster recovery plans, incident response plans, contingency plan, contingency plan test report, plans of action and milestones (POA&M) development, exception and waiver letters development, annual security control self-assessment, and continuous monitoring activities.
- Participate in systems analysis, systems development, and information technology medical program management.
- Participate in the development of electronic medical systems or electronic government projects, including development of agency policies and procedures.
- Work closely with project managers and senior technical leads to ensure work meets client objectives.
- Participate in the preparation of project briefings and reports. Present oral reports/briefings.
- Develop/contribute to guidelines/plans/policies, analyses and reviews that require IA expertise in the areas of security incident response, IA ticket assignment, tracking and response, vulnerability scans, security assessments, accreditation/certification

## HEALTH IT INFORMATION ASSURANCE NETWORK SPECIALIST

**Education:** Bachelor's Degree in Cybersecurity, Health Informatics, Computer Science, Information Systems, Engineering, Business, or other related scientific or technical discipline

**Experience:** 2-3 years of related experience in security assessments, certification development, and accreditation plans.

### Duties/Responsibilities:

- Perform IT security assessments and develop certification and accreditation plans for clinical systems and healthcare organizations.
- Assist medical treatment facilities with conversion from DIACAP to RMF.
- Provide map and gap of sites from DIACAP to RMF and uploading into eMASS
- Provide technical, administrative direction, and review for Information Assurance (IA) and Security controls as it pertains to RMF.
- Identify industry accepted standards, IT standards, and IT medical standards for validated data, access control, roles definition, authentication methods and apply to existing clinical systems.
- Review, analyze existing systems, identify and understand business rules and technical requirements as part of strategic development, implementation, and support for IA practice.
- Contribute to research and analysis, and translate security policy and requirements to define best methods and practices within a medical environment.
- Provide technical guidance on implementation of security mechanisms and controls on medical systems and operational environments.
- Develop System Security documentation, including FIPS-199 determination, e-Authentication, privacy threshold analysis, privacy impact assessment, system security plans (SSP), IA policies, Rules of Behavior, security test and evaluation (ST&E) plans, risk assessment plans and reports, business continuity plans, disaster recovery plans, incident response plans, contingency plan, contingency plan test report, plans of action and milestones (POA&M) development, exception and waiver letters development, annual security control self-assessment, and continuous monitoring activities.
- Participate in systems analysis, systems development, and information technology medical program management.
- Participate in the development of electronic medical systems or electronic government projects, including development of agency policies and procedures.
- Work closely with project managers and senior technical leads to ensure work meets client objectives.
- Participate in the preparation of project briefings and reports
- Present oral reports/briefings
- Develop/contribute to guidelines/plans/policies, analyses and reviews that require IA expertise in the areas of security incident response, IA ticket assignment, tracking and response, vulnerability scans, security assessments, accreditation/certification.

## HEALTH IT TECHNICAL WRITER I

**Education:** Bachelor's Degree + 3 years of related experience, Education, Journalism, Technical Writing, or Communications. 4 years of experience may substitute for Bachelor's degree and 7+ years of related experience could be considered.

**Experience:** 3 years in writing and/or editing technical documents, researching and gathering technical and background information.

**Duties/Responsibilities:** The candidate must be able to work independently and interact with other IT Health Engineering sections. Primary responsibility will be to create, edit and track technical documentation across several IT medical engineering disciplines in the department and to interact directly with the medical Project Office for project plan documentation deliverables. The successful candidate will need a solid foundation in research techniques. The candidate must be capable of understanding and experience with writing Health IT publications and materials. The candidate must be able to accept ad hoc projects with no prior knowledge. Strong documentation and writing skills are necessary. Good interpersonal and customer skills are required.

## HEALTH IT CONSULTANT RECORDS MANAGEMENT

**Education:** A Bachelor's Degree or Master's degree in Healthcare Administration, Healthcare Management, Health Informatics, Education, Journalism, Technical Writing, Communications, Business, or other related discipline is required.

**Experience:** 5 years of experience in creating/implementing policy for records storage, security, and governance.

**Duties/Responsibilities:**

- The candidate must be able to provide services for evaluation, planning, requirements analysis, design, development, and testing of clinical records management and retention.
- Create and implement a policy, compliant with medical IT policies and directives, which determines which data should be treated like corporate assets vice mission assets.
- The candidate must have the ability to build an information governance team that includes IT health operations – storage, security and records managers – as well as legal and compliance officers and mission representatives.
- Assign performance, availability, security and retention periods to clinical and business data that align with compliance and regulatory requirements and the physical storage infrastructure.
- Provide technical support for records transition to SharePoint 2010 in support of Records management.

## TERMS AND CONDITIONS APPLICABLE TO ANCILLARY SUPPLIES AND /OR SERVICES (SPECIAL ITEM NUMBER ANCILLARY)

Non-professional labor categories must be incidental to, and used solely to support professional services, and cannot be offered or purchased separately. Further, non-professional labor categories shall be offered under SIN ANCILLARY only and must be offered in conjunction with professional service SINS.

The Service Contract Labor Standards (SCLS) may be applicable to services offered under SIN 132 100. The following language shall be included at the end or beginning of each detailed position description. "Non-professional labor categories must be incidental to, and used solely to support professional services, and cannot be purchased separately.

Ancillary supplies and/or services are support supplies and services which are not within the scope of any other SIN under schedule 70.

### ANCILLARY LABOR CATEGORY DESCRIPTIONS - ANCILLARY

#### HELP DESK SUPPORT SERVICES SPECIALIST (SCA: 01020 ADMIN ASSISTANT)

Education: Associate degree in Computer Science, Engineering or similar technical Degree.

Experience: Three (3) years of professional/technical experience

Duties/Responsibilities: Provides phone, email, web, and in-person support to users in the areas of e-mail, directories, computer operating systems, desktop applications for all types of computer systems, and applications. Serves as the first point of contact for troubleshooting hardware/software, all types of computer systems (PC and Mac), and printer problems.

#### TECHNICAL WRITER/TRAINER (SCA: 30461 - TECHNICAL WRITER I)

Education: Associate degree in Computer Science, Engineering or similar technical Degree.

Experience: Three (3) years of professional/technical experience

Duties/Responsibilities: Responsible for assisting in collecting and organizing information required for preparation of information system specifications, requirement documents, user's manuals, training materials, and installation guides. Edits functional descriptions, system specifications, user's manuals, special reports, or any other customer deliverables and documents.