

INFORMATION TECHNOLOGY ENTERPRISE SOLUTIONS-3 SERVICES (ITES-3S)

ORDERING GUIDE



TekSynap

TECHNOLOGY MOVING AT THE SPEED OF THOUGHT*



Submitted by:

TekSynap

Contract Number: W52P1J-18-D-A139

CAGE: 561P9

1900 Oracle Way, Suite 800

Reston, VA 20190





**TEKSYNAP INFORMATION TECHNOLOGY ENTERPRISE SOLUTIONS-3
SERVICES (ITES-3S)
ORDERING GUIDELINES**

TABLE OF CONTENTS

1.0 General Information	3
1.1. TekSynap and ITES-3S	3
1.2. Background	3
1.3. Purpose	3
1.4. Scope	3
1.5. ITES-3S Task Areas	4
1.6. ITES-3S Labor Categories and Descriptions	7
2.0 Team TekSynap	8
2.1. TekSynap Program Management Office (PMO)	8
2.2. Points of Contact	9
2.3. Contract Terms	9
2.4. Performance-based Service Acquisition (PBSA)	10
2.5. Fair Opportunity to Be Considered	10
2.6. Situations Requiring Hardware or Software Acquisition Software	10
3.1. Army Contracting Command – Rock Island (ACC-RI)	11
3.2. Computer Hardware, Enterprise Software and Solutions (CHESS)	12
3.3. Requiring Activity (RA)	12
3.4. Ordering Contacting Officer (OCO)	12
3.5. Order Contracting Officer’s Representative (OCOR)	13
3.6. TekSynap	13
3.7. Ombudsman	13
4.0 Ordering Guidance	14
4.1. General	14
4.2. Pricing	15
4.3. Small Business Set Aside	15
4.4. Order Forms and Numbering	16
4.5. Delivery Requirements	16
4.6. Security Considerations	16
4.7. Fair Opportunity to be Considered	16
4.7.1. Exceptions to Fair Opportunity	17
5.0. Ordering Procedures	17
5.1. Task Order Request	17
5.2. Task Order Request Preparation	19
5.3. Evaluation Criteria	19
5.3.1. Technical/Management Approach	20
5.3.2. Cost/Price	20
5.3.3. Evaluation	21
5.3.4. Award	21
5.3.5. Post Award Debriefing	23
5.3.6. Evaluation of Contractor’s TO Performance	23
Attachment 1 – ITES-3S Task Order Request Checklist and Instructions – Example	25



Attachment 2 – Performance-Based Service Acquisition.....	26
Attachment 3 - Format for ITES-3S Statement of Work (SOW) – Example.....	29
Attachment 4 - Format for ITES-3S Performance Work Statement (PWS) – Example	30
Attachment 5 – Statement of Objectives (SOO) – Example	34
Attachment 6 – ITES-3S Proposal Evaluation Plan	36
Attachment 7 – Letter Request for Task Order Proposals	38
Attachment 8 – Proposal Submission Instructions and Evaluation Criteria	39
Attachment 9 – ITES-3S Selection Recommendation Document – Example.....	41
Attachment 10 – ITES-3S Acronyms Below is a list of acronyms pertinent to TekSynap’s ITES-3S Ordering Guide:	42
Attachment 12 – TekSynap ITES-3S Labor Categories and Rates (Government Site).....	48
Attachment 11 – TekSynap ITES-3S Labor Category Descriptions	57

1.0 General Information

1.1. TekSynap and ITES-3S

TekSynap Corporation understands both the pace of technology today and the need to have a comprehensive well-planned information management environment. Technology Moving at the Speed of Thought® embodies these principles – the need to nimbly utilize the best that information technology offers to meet the business needs of our customers. For over a decade, TekSynap has been supporting customers ranging from small departmental operations and maintenance efforts to leading broad nationwide deployment efforts. We synthesize the best at each level resulting in a unique service provider that combines the infrastructure and process models of larger organizations with an agile ability to cost effectively meet our customer’s requirements. As an emerging mid-Tier company, we leverage our people, processes, and technology to administer integrated enterprise-wide solutions using best practices and processes such as ITILv4, ISO 20000:2018, CMMI-SVC L5, CMMI-DEV L3, PMBOK®, ISO 27001:2013 and ISO 9001:2015.

1.2. Background

Information Technology Enterprise Solutions – 3 Services (ITES-3S) is a \$12.1 billion Multiple Award, Indefinite Delivery/Indefinite Quantity (ID/IQ) contract vehicle. The period of performance for this effort is five years, plus four one-year options for a total of nine (9) years of performance if all options are exercised. It is the Army’s primary source of Information Technology (IT) related services worldwide.

The ITES-3S task order contracts will provide industry best practices, best value non-personal services to enable a broad range of enterprise-level support services for Information Technology integration and service management activities to the Army, other Department of Defense (DoD) agencies, and all other Federal agencies including but not limited to locations in CONUS, OCONUS and warzone areas.

As a Small Business awardee, TekSynap can bid all task orders which allows Government customers to meet their small business goals.

1.3. Purpose

The purpose of ITES-3S is to meet the Army’s enterprise infrastructure and infostructure goals with a full range of innovative, world class information technology support services and solutions at a reasonable price.

TekSynap has prepared this guide as a supplement to the CHES ITES-3S Ordering Guide.

1.4. Scope

The ITES-3S scope includes Command, Control, Communications, Computers, and Information Management (C4IM) requirements as defined in Army Regulation (AR) 25-1. Additionally, ITES-3S will include the services and solutions necessary for the Army and other services to transition

from current service-centric information environments to the enterprise Joint Information Environment (JIE) as directed by the DoD CIO.

ITES-3S contemplates IT services-based solutions under which contractors may be required to provide a full range of equipment and software associated with those services. In addition to equipment and software, incidental construction may be required to provide a total solution. Therefore, end-to-end solutions to satisfy worldwide development,

deployment, operation, maintenance, and sustainment requirements are included. Also included is support for analyzing requirements, developing, and implementing recommended solutions, and operating and maintaining legacy systems and equipment.

The ITES-3S contract encompasses a full range of innovative, world-class information technology support services and solutions at a reasonable price. Firm Fixed Price (FFP), Time and Materials (T&M), and Cost Reimbursement (CR) Task Orders (TOs) are authorized under this contract. Contract Line Item Numbers (CLINs) cover the following services.

- IT Solution Services
- IT Subject-Matter Expert (SME)
- IT Functional Area Expert (FAE)
- Incidental Construction
- Other Direct Costs
- IT Solution Equipment
- Travel and Per Diem
- IT Solution Software
- IT Solution – Other Direct Costs (ODCs)

Ordering under the TekSynap ITES-3S contract is decentralized and is authorized to meet the needs of the Army, DoD, and other Federal agencies. ***Orders may be placed by any Army, DoD, or Federal Agency Contracting Officer.***

1.5. ITES-3S Task Areas

ITES-3S service solutions task areas are listed below. The task areas are further defined to list a subset of efforts that typically fall under each task area. The listed sub-tasks under the Task Areas/Service Portfolios are not all inclusive. There are many other sub-tasks that are within the ITES-3S scope not only belonging under the Service Portfolios listed below but also to Task Areas/Service Portfolios not listed. Specific details of task assignments, deliverables, documentation, training, applicable Government/department/industry standards, etc. will be provided within individual task orders.

ITES-3S Task Areas	
Cybersecurity Services	Cybersecurity Development/Solutions
	Cyber Operations
	Computer Network Defense and Offense Services
	Identity Management Solutions
	Continuous Monitoring Solutions/Services
	Cybersecurity Architecture
	Cyber Forensics & Analytics
	Mobile Security Solutions
	Computer Security Awareness and Training
	Computer Security Incident Response
	Information, System, Data, and Physical Security
	Mainframe Automated Information Security Support
	Biometrics
	Continuity of Operations
	Contingency Planning
	Critical Infrastructure Protection
	Cryptographic Support and Service
	Disaster Recovery
	Policy and Compliance,
	Public Key Infrastructure and CAC authentication
	Remote Monitoring/Intrusion Detection
	Security Architecture Design,
	Security Hardening
	Secure Video Teleconferencing
	System Certification and Accreditation
System Recovery Support Services	
Information Technology Services	Application and Service Hosting
	Automated Workflow System Development and Integration
	Big Data Analysis/Management
	Configuration Management
	Capacity Management
	Computer Aided Design/Engineering/Management (CAD/CAE/CAM)
	Computer Systems Administration, Management, and Maintenance
	Design/Specifications for Information Systems
	Data and/or Media Management
	Data Storage Management
	Data Warehousing
	Database Applications Development
	Design/Specifications for Information Dissemination
	DoDAF-based Operational & System Architecture Design & Development
	Economic/Business Case Analysis (Cost/Benefit and Risk)
	Electronic Commerce and Electronic Data Interchange Support
	Global/Geographic Information Systems
	Informatics
	Information Architecture Analysis
	IT Architecture Support
Internet/Intranet/Web Applications/Network Computing	
Legacy Systems Modernization	

	Performance Benchmarking/Performance Measurements
	Property Management
	Section 508 Compliance Support
	Simulation and Modeling
	Software/Middleware Development
	Source Data Development
	Statistical Analysis
	Systems Development and Software Maintenance
	Systems Programming
	Video Conferencing/Audio /Visual/Media Systems
	Voice over Internet Protocol (VOIP)
	Web and Computer Systems Decision Support Tools
	Web Enabled Applications
Enterprise Design, Integration, and Consolidation	Collaboration Systems/Facility Development
	Compliance with Interoperability Standards
	Cost Benefit/Cost Effectiveness Analysis
	Independent Verification and Validation
	Information and Knowledge Engineering
	Information Management Life Cycle Planning/Support
	Integrated Solutions Management
	Knowledge Engineering/Management
	Market Research and Prototyping
	Measuring Return on Investment (ROI)
	Earned Value Management
	Product Integration
	Reliability and Maintainability
	Requirements Analysis
	Resource Planning Systems Development and Integration
	Resource Systems Management
	Resource Systems Planning
	Reverse Engineering
	Software Engineering
	Software Life Cycle Management
	Systems Integration
	Technology Insertion
	Test and Evaluation
	Wireless Networking
Commercial Cloud Computing	Hosting
	Transition
	Modernization
Telecommunications/Systems Operation and Maintenance	Telecommunications Infrastructure Office Automation Support
	Voice over IP Support
	Handset Management/Asset Management
Network/Systems Operation and Maintenance	Computer Center Technical Support
	Commercial Off-the-Shelf Software Products and Support
	Computer Systems Administration
	Computer Systems Facilities Management and Maintenance
	Licensing Support
	Legacy Systems Maintenance
	Network Management
	Help Desk Support

	Desktop Support
	Software License Management
	Supply Chain Management
	Network Infrastructure Support
	Office Automation Support
	Seat Management/Asset Management
	Network/Systems Operation and Maintenance
	Telecommunications Infrastructure Office Automation Support
	Voice over IP Support
	Handset Management/Asset Management
Business Process Reengineering (BPR)	Benchmarking/Operational Capability Demonstrations
	Business Case Analysis,
	Customer Relationship Management
	E-Business Planning and Support
	Functional Requirements Decomposition
	Gap Analysis
	IT Capital Planning
	Quality Assurance
	Risk Management
	Workflow Analysis
IT Supply Chain Management	Logistics
	Purchasing
	Inventory Management
	Vendor Management
	Subcontractor Management
IT Education and Training	User Training Purchasing
	Instructional Design and Modeling & Simulation
	Design & execution of computer-generated imaging/training

1.6. ITES-3S Labor Categories and Descriptions

ITES-3S labor categories have been harmonized with the Office of Management and Budget's (OMB) Standard Occupational Classification (SOC) for which the Bureau of Labor Statistics (BLS) maintains compensation data. TekSynap Labor Categories and Rates are available in Attachment 12, TekSynap ITES-3S Labor Categories and Rates. Labor categories are further defined as Associate, Intermediate, and Senior based on years of experience, education, and duties/responsibilities as follows:

- **SENIOR:** A Senior employee has over 10 years of experience and an MA/MS degree. A Senior employee typically works on high-visibility or mission critical aspects of a given program and performs all functional duties independently. A Senior employee may oversee the efforts of less senior staff and/or be responsible for the efforts of all staff assigned to a specific job.
- **INTERMEDIATE:** An Intermediate employee has more than five years of experience and a BA/BS or MA/MS degree. An Intermediate employee typically performs all functional duties independently.
- **ASSOCIATE:** An Associate employee has less than five years of experience and a BA/BS degree (or in certain technical roles, a BS). An Associate employee is responsible for assisting more senior positions and/or performing functional duties under the oversight of more senior positions.

2.0 Team TekSynap

As the Prime Contractor, TekSynap has assembled a team of subcontractors comprised of companies that offer experience and best-of-the-best capabilities across all eight ITES-3S task areas. TekSynap put careful thought, time, and effort into identifying the right team for ITES-3S. Our team covers each task area with redundancy to ensure no single thread for any task area and consists of many specialized vendors with a solid history of providing outstanding IT solutions and support to the DoD community and the Federal Government.

Team TekSynap includes a number of leading Service-Disabled Veteran-Owned Small Business (SDVOSB) and Veteran-Owned Small Business (VOSB) companies having specific expertise with the Army's application environment, IT infrastructure, and mission. In addition to Veteran-Owned concerns, we leverage small businesses across the following socio-economic categories: Small Disadvantaged Business (SDB), Women Owned Small Business (WOSB), and Historically Underutilized Business Zones (HUBZones), which provide Army-specific and Army-applicable technology experience. We augment this team with large business partners providing extensive resource pools to draw upon. Collectively, Team TekSynap provides expert capabilities and Army experience across the ITES-3S task areas enabling exceptional support for task order (TO) technical requirements in all eight task areas. We are committed to meeting the ITES-3S Small Business goals with this team.

2.1. TekSynap Program Management Office (PMO)

Team TekSynap's ITES-3S Program Management Office (PMO) provides centralized IDIQ contract management with a strong governance model while distributing TO management and responsibility across TO support teams. Our organizational structure establishes clear lines of authority and responsibility for managing all task orders, provides a single point of accountability, and establishes a responsive, agile management structure for meeting customer needs and ensuring end-to-end IDIQ and TO execution. TekSynap maintains a Top-Secret Facility Clearance with cleared employees up to Top Secret, SCI.

We proactively monitor subcontractor performance through peer reviews, weekly status reviews, monthly program reviews, and quality control/quality assurance (QC/QA) audits for early identification of risks or issues. Each TO Quality Control Plan (QCP), based on the Quality Assurance Surveillance Plan and Performance Requirements Standards (PRS), ensures that quality metrics flow down to subcontractors. The Team works in concert to achieve performance metrics while the PMO aggregates multiple TO metrics, assuring timely reporting and continuous assessment of customer satisfaction and quality.

Team TekSynap's management processes includes a fully Automated Integrated Management Tool Suite (AIMTS) and streamlines IDIQ management using web-based collaboration tools. Because of our repeatable processes and AIMTS our team can be easily managed and monitored.

Some of the highlights of using AIMTS include:

- Shorter planning cycle resulting in forecasting more frequently and proactively adjusting to changing requirements

- Real-time collaboration and communication between the ITES-3S PM, subcontractors and customers improving customer relationships and satisfaction
- Established measurements for guiding management, facilitating planning and goal setting for managing performance-based contracts.

The assembled team, comprised of a balance of small and large businesses, ensures our ability to meet small business participation targets in each socio-economic category while providing high caliber support services and adequate resources for surge requirements and multiple simultaneous tasks spanning global locations.

2.2. Points of Contact

TekSynap POC	Email	Phone
Program Management Office	ITES3S-PMO@TekSynap.com	
Marla Helveston, COO	mj.helveston@teksynap.com	(985)774-4594
Jason Ballah, Vice President	jason.ballah@teksynap.com	(202) 856-7223
Jeremy McGowan, Program Manager	jeremy.mcgowan@teksynap.com	(304) 844-7284
Kaitlyn Eber Quality Manager/FSO	security@teksynap.com	(571) 445-5088
Kim Comstock Contracts Manager	contracts@teksynap.com	(703) 409-7563
Government POC	Email	Phone
Keith Copeland ITES-3S Product Officer, CHESS	james.k.copeland1.civ@army.mil	(703) 806-8222 DSN: 656-8222
Jennifer Mueller Contracting Officer	jennifer.m.mueller13.civ@army.mil	(309) 782-3632 DSN: 793-3632

2.3. Contract Terms

The TekSynap ITES-3S contract has the following contract terms and provisions:

Contract Terms	ITES-3S
Contract Maximum	<ul style="list-style-type: none"> • \$12,100,000,000 • The contract maximum represents the total requirement for the life of the contract (including options, if exercised)
Period of Performance	9 Years: <ul style="list-style-type: none"> • One five-year base Ordering Period starting September 25, 2018 • Four one-year Ordering Period options (if exercised) • PoP Year September 25 - September 24 • Expires September 2027

	<ul style="list-style-type: none"> All performance at the task order level must end 12 months after the IDIQ expires, which is 24 Sep 2027 therefore all task order performance must end on 24 Sep 2028.
Pricing Structure	<ul style="list-style-type: none"> FFP T&M CR
Performance-Based Contracting	<ul style="list-style-type: none"> Mandatory method for acquiring IT services (Army) Preferred method for acquiring IT services (all other DoD and Federal agencies)
Fair Opportunity to be Considered	<ul style="list-style-type: none"> Subject to Federal Acquisition Regulation (FAR) 16.505
Ordering Guidance and Process	<ul style="list-style-type: none"> See Section 3 Ordering Guide - Ordering Guidance

2.4. Performance-based Service Acquisition (PBSA)

PBSA is an acquisition structured around the results to be achieved as opposed to the manner by which the work is to be performed. Orders placed under ITES-3S are not required to be performance-based under all circumstances; however, policy promulgated by the NDAA for FY 2001 (PL 106-398, section 821), FAR 37.102, and FAR 16.505(a), establishes PBSA as the preferred method for acquiring services. In addition, for DoD agencies, DFARS 237.170-2 requires higher-level approval for any acquisition of services that is not performance-based. Accordingly, it is expected that most ITES-3S orders will be performance-based. A Performance Work Statement (PWS) or Statement of Objectives (SOO) should be prepared to accompany the Task Order Request (TOR) to the ITES-3S Prime Contractors. Reference this Ordering Guide's Attachments 2, 3, 4, and 5 for further information on PBSA and specific details and resources for the preparation of a PWS or SOO.

2.5. Fair Opportunity to Be Considered

- IAW 10 U.S. Code § 2304c(b) and FAR 16.505(b), the Ordering Contracting Officer (OCO) must provide each ITES-3S contractor a fair opportunity to be considered for each order exceeding \$3,500, unless an exception applies.
- FAR 16.505, DFARS 216.5 contain procedures on exceptions to the fair opportunity process, as well as details on the applicability and implementation of fair opportunity to be considered.

2.6. Situations Requiring Hardware or Software Acquisition Software

- In situations where it is necessary to purchase new commercial software, including preloaded software, to satisfy the requirements of a particular TO, TekSynap will first be required to review and utilize available DoD Enterprise Software Initiative (ESI) agreements.
- If software is not available to the contractor through a DoD ESI source, TekSynap shall be authorized to obtain the software through an alternate source. **For Army users**, a Statement of

Non-Availability (SoNA) is required from CHES when acquiring non-ESI software regardless of the dollar value. Customers shall access the SoNA process, located on the IT e-mart at <https://chess.army.mil/Content/Page/SoNA>. The SoNA should be included in the TO file upon award.

- For DoD users, a Non-DoD contract certification and approval is required for software buys, with the exception of the Microsoft Premier software IAW DFARS 217.78. This Non-DoD documentation is required because the ESI Blanket Purchase Agreements are established against General Services Administration (GSA) ID/IQs.

Related incidental Commercial off-the-shelf (COTS) Hardware and Software

- If related incidental hardware and/or software are required for a particular TO, the CHES hardware contracts are the preferred source of supply. For Army users, CHES is the mandatory source for hardware and software IAW Army Federal Acquisition Regulation Supplement (AFARS) 5139.101. Army customers are required to procure COTS IT products through CHES. The vendor must attempt to submit a Request for Quote (RFQ) on behalf of the customer. A Letter of ITES-3S Ordering Guide 14 Authorization (LOA) is required prior to an RFQ submission. OCO's are responsible for obtaining an LOA for vendors to purchase on their behalf of their organization. This requirement is for any task orders that use Army Funds or are purchasing on behalf of the Army. The listing of COTS hardware and software available from CHES sources can be viewed on the IT e-mart at <https://chess.army.mil> Note: Please see CHES ITES-3S Contracts Page for the LOA template. <https://chess.army.mil/Contract/Program?Name=ITES-3S>
- If it has been determined that the CHES contracts do not meet the organizational requirements or it has been determined the products must be purchased from another source, the customer must submit a request for a Statement of Non-Availability (SoNA), regardless of dollar value. The customer can obtain access to the SoNA process, located on the IT e-mart at <https://chess.army.mil/Content/Page/SoNA>. The SoNA should be included in the TO file upon award.

This section provides a summary of the roles and responsibilities for the primary organizations in the ITES-3S contract process.

3.1. Army Contracting Command – Rock Island (ACC-RI)

The ACC-RI Procuring Contracting Officer's (PCO) roles and responsibilities are as follows:

- Serves as the PCO for the ITES-3S contracts. The PCO has overall contractual responsibility for the ITES-3S contracts. All orders issued are subject to the terms and conditions of the contract. The contract takes precedence in the event of conflict with any ask order or the Ordering Guide.
- Provides advice and guidance to Requiring Activities' (RA), OCOs, and contractors regarding contract scope, acquisition regulation requirements, and contracting policies.

- Approves and issues base ITES-3S contract modifications.
- Represents the Contracting Officer position at various contract-related meetings.

3.2. Computer Hardware, Enterprise Software and Solutions (CHESS)

The CHESS organization's roles and responsibilities are as follows:

- Required Activities (Ras) / Administrative Contracting Officer Representative (ACOR) for this acquisition
- Maintains the IT e-Mart, a no-fee flexible procurement strategy through which an Army user may procure COTS IT hardware, software, and services.
- The CHESS IT e-mart website is: <https://chess.army.mil>.
- With support from the Information Systems Engineering Command, Technology Integration Center, CHESS assists Army organizations in defining and analyzing requirements for meeting the Army's enterprise infrastructure and infostructure goals.
- Works with other RAs, including those outside of the Army, to help them understand how ITES-3S can best be used to meet their enterprise requirements.
- Conducts periodic meetings with the prime contractors, *e.g.*, In-Process Review, as needed to ensure requirements, such as approved DoD standards, are understood.

3.3. Requiring Activity (RA)

An RA is defined as any organizational element within the Army, DoD, or other Federal Agencies. The RA's roles and responsibilities are as follows:

- Adheres to the requirements and procedures defined in the ITES-3S contracts and these ordering guidelines.
- Defines requirements.
- Prepares TO requirements packages.
- Funds the work to be performed under ITES-3S orders.
- Provides personnel to evaluate proposals submitted.
- Provides past performance assessments.
- Monitors and evaluates contractor performance.

3.4. Ordering Contracting Officer (OCO)

The OCO's roles and responsibilities are as follows:

- OCOs within the Army, DoD, and other Federal agencies are authorized to place orders within the terms of the contract and within the scope of their authority.
- Not authorized to make changes to the contract terms and/or conditions. The OCOs authority is limited to the individual orders.
- Serves as the interface between the contractor and the Government for individual orders issued under the ITES-3S contracts.

- Responsible for determining if bundling of requirements (see FAR 2.101) is in compliance with FAR 7.107.
- Responsible for determining whether consolidation of requirements, compliance, and approval are IAW DFARS 207.170.
- Responsible for requesting, obtaining, and evaluating proposals/quotations and for obligating funds for orders issued.
- The OCO reserves the right to withdraw and cancel a task if issues pertaining to the proposed task arise that cannot be satisfactorily resolved.
- Responsible for identifying when Earned Value Management System is applicable at the TO level IAW DFARS 252.234-7002.

3.5. Order Contracting Officer's Representative (OCOR)

The Task Order OCOR's roles and responsibilities are as follows:

- Task Order CORs will be designated by letter of appointment from the OCO.
- Serves as the focal point for all task activities, and primary POC with the contractors.
- Provides technical guidance in direction of the work; not authorized to change any of the terms and conditions of the contract or order.
- Shall use the measures and standards set forth in the Quality Assurance Surveillance Plan (QASP) to assess contractor performance, thereby ensuring the quality of services required by the TO are met.
- Obtains required Contracting Officer Representative (COR) training. NOTE: The Department of Defense Instruction (DoDI) 5000.72 provides the DoD standards and certification:
<https://www.esd.whs.mil/Portals/54/Documents/DD/issuances/dodi/500072p.pdf?ver=2018-09-26-083124-387>

3.6. TekSynap

The principal role of the contractor is to perform services and/or deliver related products that meet requirements and/or achieve objectives/outcomes described in orders issued under the ITES-3S contract.

3.7. Ombudsman

IAW FAR 16.505(b), ITES-3S contractors that are not selected for award under a Task Order competition may seek independent review by the designated ITES-3S ordering agency's Ombudsman. The Ombudsman is responsible for reviewing complaints from contractors and ensures that all contractors are afforded a fair opportunity to be considered, consistent with the procedures set by this contract and regulation. The ACC-RI Ombudsman will review complaints from contractors on all TOs issued by ACC-RI. The Ombudsman for Task Orders not issued by ACC-RI will be the Ombudsman that supports the OCO. The designated Ombudsman for ITES-3S Task Orders issued by ACC-RI is:

John S. Thodos
Army Contracting Command-Rock Island (ACC-RI)
CCRI-OCA
3055 Rock Island Arsenal
Rock Island Arsenal
309-782-5749 / DSN 793-5749
john.s.thodos.civ@army.mil

NOTE: IAW Section 835 of the National Defense Authorization Act for Fiscal Year 2017 (codified as FAR 16.505(a)(10)), the U.S. Government Accountability Office (GAO) will entertain a protest filed for delivery orders valued in excess of \$25,000,000. The \$25,000,000.00 threshold applies to DoD, NASA, and Coast Guard. The threshold for all other agencies is \$10,000,000.00. Procedures for protest are found at Title 4 Code of Federal Regulations Part 21 (GAO Bid Protest Regulations).

4.0 Ordering Guidance

4.1. General

ITES-3S ordering procedures:

- Ordering is decentralized for all ITES-3S requirements. Ordering under the contracts is authorized to meet the needs of the Army, DoD, and other Federal agencies. There are no approvals, coordination, or oversight imposed by the PCO on any OCO. OCOs are empowered to place orders IAW the terms and conditions of the ITES-3S contract, ITES-3S ordering guidelines, the FAR, DFARS (as applicable), and the OCO's agency procedures.
- The PCO will not make judgments or determinations regarding orders awarded under the ITES-3S contracts by an OCO. All issues must be resolved consistent with individual agency procedures and/or oversight.
- Upon request, the PCO is available to provide guidance to OCOs executing orders under the ITES-3S contract.
- The CHESSE IT e-mart at <https://chess.army.mil> is available to make price comparisons among all ITES-3S awardees and solicit competitive quotes. Only services and related incidental hardware/software items are to be released on the ITES-3S IT e-mart. Hardware/software-only items are to be placed on ADMC-2 or ITES 2H/3H. The OCO will initiate the Task Order Request (TOR) process by issuing a TOR to all awardees via the CHESSE IT e-mart. OCOs MUST issue the Request for Proposal (RFP)/TORs via the IT e-mart.
- When posting an RFP/TOR, RAs are not to simply submit an ITES-3S contractor's quote as an RFP/TOR. This is considered to be contractor proprietary information.
- When posting a TOR, include specific delivery instructions for proposal responses. Contractors will indicate their interest via CHESSE IT e-mart; however, proposal packages shall be delivered by means identified in the TOR.

4.2. Pricing

- All TOs awarded pursuant to this contract on a FFP or T&M basis must be priced IAW the pricing set forth in TekSynap's ITES-3S Labor Categories and Rates, Attachment 12. The labor rates in the labor rate table reflect the fully burdened composite rates for each labor category and will apply to all direct labor hours. The composite rates include separate rates for work performed at the contractor site and at the Government site for each labor category. TekSynap may propose labor rates that are lower than those specified in its Labor Rate Table, but shall not exceed the labor rates in its Labor Rate Table.
- CR TOs are allowable under ITES-3S. CR TOs are suitable for use only when uncertainties involved in contract performance do not permit costs to be estimated with sufficient accuracy to use any type of FP TO. A CR TO may be used only when the contractor's accounting system is adequate for determining costs applicable to the TO and appropriate Government surveillance during performance will provide reasonable assurance that efficient methods and effective cost controls are used.
- The Government's minimum requirements for each labor category are identified in TekSynap ITES-3S Labor Category Descriptions, Attachment 11. TekSynap may augment their labor categories and job descriptions on a TO basis. If a TekSynap decides to augment a labor category; the labor type and cost shall not change. Augmenting a labor category is not defined as adding a new labor category. TO proposals shall be limited to only those labor categories contained within the base contract. TekSynap may propose to the Government, at its discretion, additional labor categories and job descriptions within the scope of ITES-3S. The PCO is the only official authorized to add a labor category to the base contract via contract modification.
- Unlike other labor categories, the IT Subject Matter Expert (SME), IT FAE, and incidental construction categories may only be used if no other labor category can satisfy the requirement. If the ITES-3S contractor proposes these categories when not directed by the OCO, no fee or profit is allowed. OCOs are discouraged from directing the use of FAEs and SMEs. However, if the OCO deems it necessary to direct the ITES-3S contractor to propose these categories, a fixed fee of 3% is allowable. ITES-3S contractors are required to seek and obtain approval from the OCO for the use of these categories when proposed in a TO. There is no fixed labor rate associated with the SME, FAE, and incidental construction categories.

4.3. Small Business Set Aside

The following clauses only apply at the order level when the requirement has been set-aside for Small Business:

- 52.219-3 - Notice of HUBZone Set-Aside or Sole Source Award (Nov 2011)
- 52.219-6 - Notice of Total Small Business Set-Aside (Nov 2011) with Alternate I
- 52.219-13 - Notice of Set-Aside of Orders (Nov 2011)
- 52.219-14 - Limitations on Subcontracting (Nov 2011)
- 52.219-27 - Notice of Service-Disabled Veteran-Owned Small Business Set-Aside (Nov 2011)
- 52.219-29 - Notice of Set-Aside for, or Sole Source Award to, Economically Disadvantaged Women-Owned Small Business Concerns (Dec 2015)

- 52.219-30 - Notice of Set-Aside for, or Sole Source Award to, Women-Owned Small Business Concern Eligible Under the Women-Owned Small Business Program (Dec 2015)

NOTE that the Limitations on Subcontracting clause only applies at the Task Order level. Small businesses may compete on unrestricted TOs without having to meet the requirements of the Limitations on Subcontracting clause.

The ITES-3S contract does not have a specific reserve for 8(a) participants nor any of the applicable clauses. Accordingly, there is no built-in mechanism to offer a Task Order to SBA for inclusion in the 8(a) program. Therefore, it is not possible to set-aside an award for 8(a) vendors nor is it possible to award sole source to an 8(a) vendor.

4.4. Order Forms and Numbering

An appropriate order form (Defense Department (DD) Form 1155, Order for Supplies or Services, or Non-DoD Federal agencies equivalent) shall be issued for each TO. The use of Government credit cards is also authorized IAW applicable rules and procedures. TOs may be issued via telephone, fax, e-mail, postal mail, or CHESS's IT e-mart.

4.5. Delivery Requirements

Delivery of services shall be in accordance with IAW individual orders.

4.6. Security Considerations

The level of classified access will be incorporated into individual TOs, as necessary. If determined necessary based on the level of classification, a DD Form 254, Contract Security Classification Specification, should be prepared and included in the TO request and resulting order.

4.7. Fair Opportunity to be Considered

IAW FAR 16.505(b)(2), for all orders exceeding \$3,500, the OCO shall give every ITES-3S contractor a fair opportunity to be considered for a TO unless one of the exceptions to fair opportunity applies (see paragraph below for further discussion of exceptions). The OCO must consider all ITES-3S contractors for the work though he/she is not necessarily required to contact any of them. The OCO must document his/her rationale if applying one of the exceptions to fair opportunity; however, no special format is required. All orders exceeding \$250,000 for DoD agencies must be placed on a competitive basis IAW FAR 16.505 unless a written waiver is obtained, using the limited sources justification and approval format in FAR 16.505(b)(2)(ii)(B). OCO should refer to their agency's approval authorities for placing orders on an "other than a competitive" basis. This competitive basis requirement applies to all orders by, or on behalf of, DoD. Non-DoD agencies shall comply with their own agency's procedures.

For orders by, or on behalf of, DoD exceeding \$250,000, the requirement to place orders on a competitive basis is met only if the OCO:

- Provides a notice of intent to purchase to every ITES-3S contractor, including a description of work to be performed and the basis upon which the selection will be made; and
- Affords all ITES-3S contractors responding to the notice a fair opportunity to submit an offer and to be fairly considered.

4.7.1. Exceptions to Fair Opportunity

As provided in FAR 16.505(b)(2), the OCO may waive the requirement to place an order on a competitive basis with a written limited sources justification and approval if one of the following circumstances applies:

- The agency's need for the supplies or services is so urgent that providing a fair opportunity would result in unacceptable delays. Use of this exception requires a justification that includes reasons why the ITES-3S processing time for a fair opportunity to be considered will result in an unacceptable delay to the agency. The justification should identify when the effort must be completed and describe the harm to the agency caused by such a delay.
- Only one contractor is capable of providing the supplies or services required at the level of quality required because the supplies or services ordered are unique or highly specialized. Use of this exception should be rare. When using this exception, explain: (1) what is unique or highly specialized about the supply or service, and (2) why only the specified contractor can meet the requirement.
- The order must be issued on a sole-source basis in the interest of economy and efficiency because it is a logical follow-on to an order already issued under these contracts, provided that all awardees were given a fair opportunity to be considered for the original order.
- A statute expressly authorizes or requires that the purchase be made from a specified source.

FAR 16.505(b)(1)(ii) provides that the OCO is not required to contact each of the awardees if information is available that will ensure that each awardee is provided a fair opportunity to be considered for each order.

The OCO must follow his/her agency's procedures for documenting the process and rationale for selection of the awardee for each TO. At a minimum, the OCO must document the selection to include price consideration.

5.0. Ordering Procedures

5.1. Task Order Request

The RA prepares the TOR package and submits it to the OCO. An example of a TO checklist can be found at Attachment 1, ITES-3S Task Order Request Checklist.

NOTE: When submitting requests ensure that the customer and/or site address is correct and includes as much information as possible to allow for an accurate proposal. (i.e. serial numbers, manufacturer/part numbers, quantities, whether the requirement is a renewal or new requirement,

customer ID number, contract numbers, renewal contract number or other type of account identifier.)

At a minimum, the package should contain the following:

- Statement of Work (SOW), PWS, or SOO: the RA may select from these work statements, depending on their specific requirements; however, performance-based orders must be used to the maximum extent possible for services as required by FAR 37.102 and FAR 16.505(a) (see Attachment 2, Performance-Based Service Acquisition).
- Specific formats have been developed to streamline the processing time. See examples of the SOW at Attachment 3, the PWS at Attachment 4, and the SOO at Attachment 5.
 1. The PWS identifies the technical, functional, and performance characteristics of the Government’s requirements. The PWS describes the work in terms of the purpose of the work to be performed rather than either “how” the work is to be accomplished or the number of hours to be provided.
 2. The SOO is an alternative to the PWS. It is a very brief document (commonly 2-10 pages, depending upon complexity, although there is no maximum or minimum required length) that summarizes key agency goals and outcomes to which contractors respond. It is different from a PWS in that, when a SOO is used, offerors are asked to develop and propose a PWS as part of their solution. Typically, SOO responses would also propose a technical approach, performance standards, incentives/disincentives, and a QASP based upon commercial practices.

At a minimum, a SOO must contain the following information:

- Purpose
- Scope or mission
- Period and place of performance
- Background
- Performance objectives (i.e., required results)
- Any operating constraints

Upon award, the winning offeror’s solution to the SOO should be incorporated into the resulting TO; the SOO itself is not part of the TO.

- Funding Document: ITES-3S Orders are funded by the OCO’s RA. Individual OCOs should provide specific instructions as to the format and content.
- Independent Government Cost Estimate: the estimate will assist the OCO in determining the reasonableness of the contractors’ cost and technical proposals. The estimate is for Government use only and should not be made available to the

- ITES-3S contractors.
- Basis for TO Award: the OCO, in conjunction with the RA, develops the evaluation criteria that form the basis for TO award. Whether the award will be based on low price, technical acceptability or best value, the criteria should be provided to the contractor. If the award will be based on best value, evaluation factors and significant sub factors that will affect contract award and their relative importance should be shown. Attachment 6, ITES-3S Proposal Evaluation Plan, has been developed as a recommended format for documenting the basis for award.

5.2. Task Order Request Preparation

The OCO will issue a TOR to all ITES-3S Prime Contractors for orders exceeding \$3,500.00. The request will include a transmittal letter identifying the TO strategy, contract type, proposal receipt date and time, estimated contract start date, period of performance, and any other related information not contained elsewhere; the appropriate work statement; instructions for submission of a technical and cost/price proposal and selection criteria/basis for award, any special requirements (i.e., security clearances, travel, special knowledge); and other information deemed appropriate for the respective order. Attachment 7, Letter Request for Task Order Proposals, contains a recommended memo requesting proposals and Attachment 8, Proposal Submission Instructions and Evaluation Criteria, contains sample instructions/basis for award.

- Recommend a submission date of 10 calendar days after issuing a TO request for receipt of proposals; however, the scope and complexity of the TO should be considered when determining proposal due date.
- If unable to perform a requirement, the contractor shall submit a “no bid” reply in response to the proposal request. All “no bids” shall include a brief statement as to why the contractor is unable to perform, *e.g.*, conflict of interest.
- In responding to proposal requests that include a requirement to provide products as part of an overall IT services solution, ITES-3S contractors are expected to use CHES hardware contracts as preferred sources of supply. Other sources may be proposed but will require justification by the contractor and the approval of the OCO. In addition, contractors are expected to facilitate maximum utilization of ESI source software.
- The IT e-mart has the capability for up to five attachments per proposal. If contractors are to submit a proposal greater than five attachments and the OCO is allowing the contractor to email the balance of the attachments, the OCO is expected to state which attachments are to be submitted through the e-mart.

5.3. Evaluation Criteria

All evaluation criteria must be identified and clearly explained in the TOR. The TOR must also describe the relative importance of the evaluation criteria. The OCO, in conjunction with the RA, may consider the following evaluation criteria (price or cost must be a factor in the selection criteria) to evaluate contractors’ proposals:

5.3.1. Technical/Management Approach

- Understanding of the requirement
- Technical and management approach
- Staffing plan (e.g., skill mix, personnel experience or qualifications and availability of personnel, performance location)
- Areas of expertise
- Past performance on prior TOs under this contract (e.g., approach, personnel, responsiveness, timeliness, quality, and cost control) (**NOTE:** *If practicable, automated systems such as Past Performance Information Management System or Past Performance Information Retrieval System should be utilized in lieu of requesting past performance information from the contractors*).
- Current distribution of workload
- Knowledge of the customer's organization
- Teaming arrangements (including subcontracting)
- Security (including clearance level)
- Performance-based approach
- Other specific criteria as applicable to the individual TO

5.3.2. Cost/Price

This part of the proposal will vary depending upon the contract type planned for the TO. It should include detailed cost/price amounts of all resources required to accomplish the TO (labor hours, rates, travel, etc.). TekSynap may not exceed the labor rates specified in its ITES-3S Labor Categories and Rates (See Attachment 12). However, TekSynap is permitted to propose labor rates that are lower than those established in the Labor Rate Table. TekSynap must fully explain the basis for proposing lower rates. The proposed reduced labor rates will not be subject to audit; however, the rates will be reviewed to ensure the Government will not be placed at risk of nonperformance. The reduced labor rates will apply only to the respective TO and will not change the fixed rates in Labor Rate Tables. The level of detail required shall be primarily based on the contract type planned for use, as further discussed below.

- FFP and T&M. The proposal shall identify labor categories IAW the ITES-3S Price Matrices and the number of hours required for performance of the task. The proposal must identify and justify use of all non-labor cost elements. It must also identify any Government-Furnished Equipment (GFE) and/or Government Furnished-Information (GFI) required for task performance. If travel is specified in the TOR, airfare and/or local mileage, per diem rates by total days, number of trips, and number of contractor employees traveling shall be included in the cost/price proposal. Other information shall be provided as requested in the proposal request.
- CR. Both “sanitized” and “unsanitized” cost/price proposals will be required for CR-type TOs only. “Unsanitized” cost proposals are complete cost proposals that include all required information. “Sanitized” cost proposals shall exclude all company proprietary or sensitive data

but must include a breakdown of the total labor hours proposed and a breakout of the types and associated costs of all proposed ODCs. Unless otherwise noted, unsanitized proposals will only be provided to the OCO, while sanitized proposals may be provided to the evaluator(s) and other personnel involved in the procurement. Cost/price proposals shall include, at a minimum unless otherwise indicated in the TOR, a complete work breakdown structure that coincides with the detailed technical approach and provides proposed labor categories, hours, wage rates, direct/indirect rates, ODCs, and fees. CR proposals shall be submitted IAW FAR clause 52.215-20 “Requirements for Cost or Pricing Data or Information Other Than Cost or Pricing Data.”

5.3.3. Evaluation

If a “mini-competition” is being conducted, a panel of evaluators should be appointed to review the proposals submitted by ITES-3S contractors. For each non-price evaluation factor, the evaluators should identify strengths and weaknesses in the proposals and should assign an adjectival rating (*e.g.*, outstanding, good, etc.) for each non-price factor. The evaluators’ findings should be documented in a written evaluation report. The price factor should be evaluated independently from the non-price factors. Individuals who are evaluating non-price aspects of the proposal should not have access to pricing information while performing their evaluations. Evaluations must be conducted fairly and IAW the selection criteria in the solicitation. After an initial evaluation of proposals, negotiations (discussions) may be held. Refer to FAR Part 15 for general guidance on the proper conduct of discussions.

5.3.4. Award

Once evaluations are completed, an authorized selection official must make an award decision and document the rationale for his/her decision. Prior to making a decision, copies of all evaluations must be forwarded to the selection official for his/her review and consideration. Attachment 9 is an example of the Selection Recommendation Document.

The Selection Recommendation Document is signed by the selection official and forwarded to the OCO. This form can also be used to document an exception to the fair opportunity requirements.

At a minimum, the following information shall be specified in each TO Award:

- Date of order
- POC (name), commercial telephone and fax numbers, and e-mail address
- OCOs commercial telephone number and e-mail address
- Description of the services to be provided, quantity unit price and extended price, or estimated cost and/or fee (TO INCLUDE THE CLIN FROM PART B). The work statement should be attached; the contractor’s proposal may be incorporated by reference
- Delivery date for supplies
- Address and place of performance

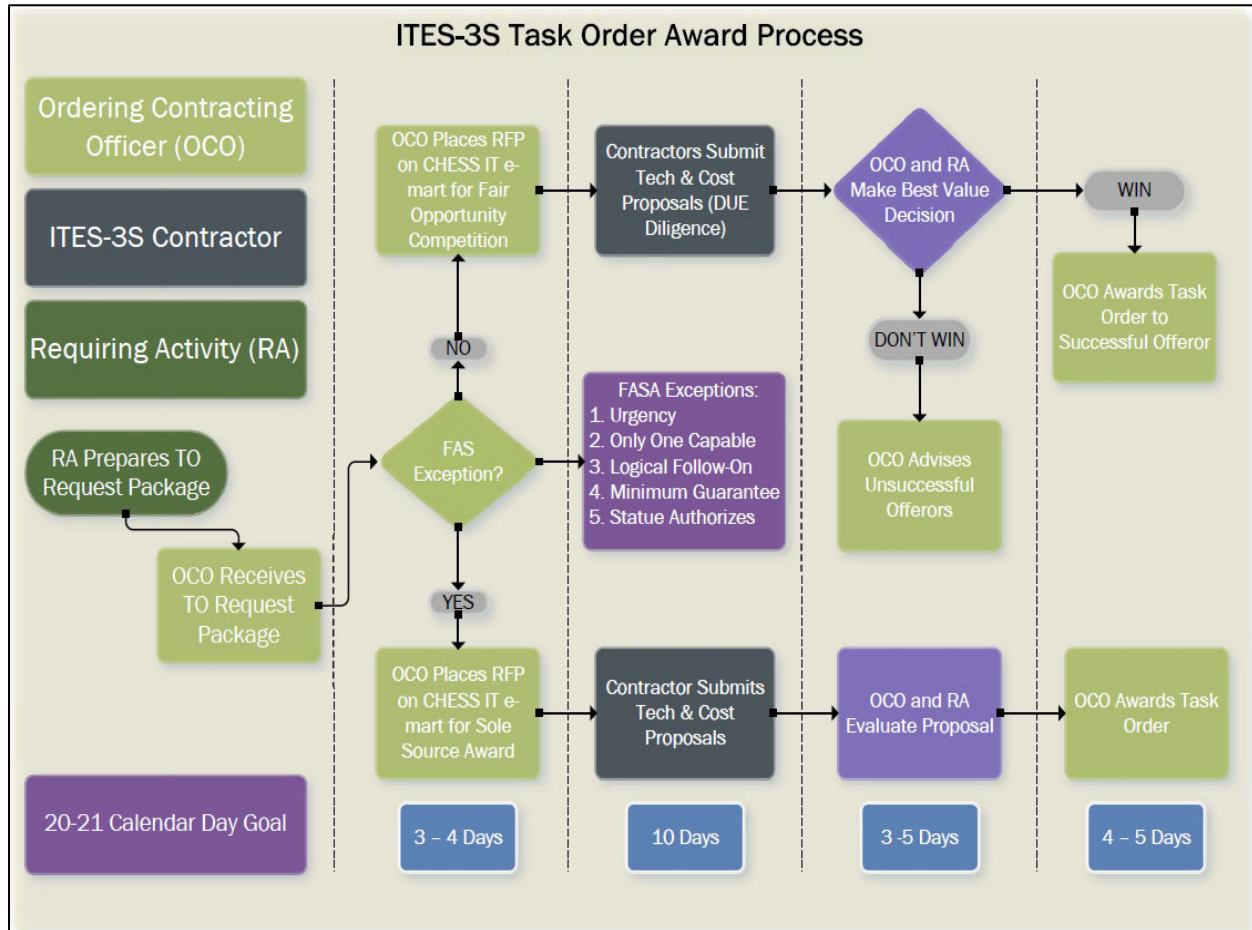
- Packaging, packing, and shipping instructions if any
- Accounting and appropriation data and Contract Accounting Classification Reference Number (ACRN) (Defense Finance and Accounting Service requires an ACRN(s) on all orders)
- Specific instructions regarding how payments are to be assigned when an order contains multiple ACRNs
- Invoice and payment instructions
- Any other pertinent information

IAW 10 U.S. Code § 2304c(d) and FAR 16.505(a)(10), the ordering agency's award decision on each order is generally not subject to protest under FAR Subpart 33.1 except for a protest that an order increases the scope, period, or maximum value of the contract. In lieu of pursuing a bid protest, ITES-3S contractors may seek independent review by the designated Ombudsman. The Ombudsman will review complaints from the contractors and ensure that all contractors are afforded a fair opportunity to be considered for each order, consistent with the procedures in the contract. The designated Ombudsman is identified in Section 3.7, of these guidelines.

The executed order will be transmitted via fax, e-mail, or by verbal direction from the OCO. If verbal direction is given, written confirmation will be provided within five working days.

After award, timely notification shall be provided to the unsuccessful offerors and will identify, at a minimum, the awardee and award amount.

The ITES-3S TO award process is illustrated on the following page:



5.3.5. Post Award Debriefing

Under 10 USC § 2305(b)(5), unsuccessful offerors in competitions for TOs exceeding \$5,500,000 have the right to a post-award debriefing if they meet certain request deadline requirements. The deadline requirements can be found in FAR 15.506(a)(1). Under FAR 15.506(a)(4)(i), untimely debriefing requests may be accommodated, and 15.506 is not limited to unsuccessful offerors. Timely requests for a post-award debriefing for TOs meeting the threshold above must be honored, and their debriefings must meet the requirements of FAR 15.506. Also, contracting officers are encouraged to provide debriefings to untimely offerors under competitions exceeding \$5,500,000 and to offer a debriefing to all other offerors under TO competitions, even those valued below the mandatory threshold described above. Non- mandatory debriefings should follow all of the requirements in FAR 15.506(d), (e), and (f). Debriefings may be done orally, in writing, or by any method acceptable to the contracting officer.

5.3.6. Evaluation of Contractor’s TO Performance

At TO completion, the ITES-3S contractor submits a request for a performance evaluation to the order’s COR or his/her designated representative. The order’s COR or his/her designated

representative shall complete these evaluations for each TO, regardless of dollar value, within 30 days of completion. Performance evaluations shall also be completed annually for orders that have a performance period in excess of one year. Annual performance evaluations shall be completed within 30 days of TO renewals.

Performance evaluations may also be done, as otherwise considered necessary, throughout the duration of the order (but generally no more than quarterly). performance evaluations will be located on the CHESS IT e-mart at https://chess.army.mil/Static/SRV_ITS_SB_EVL_CON.

Contractor Performance Assessment Reports (CPARs) are required in the IT or Services sectors for actions valued at \$1M or above. A final CPAR is performed when all performance on the contract is completed. Interim CPARs must be performed on deliveries/performance exceeding 18 months. A CPAR should contain past performance information that is current and relevant information for future source selection purposes. It includes the contractor's record of conforming to contract requirements, standards of good workmanship, forecasting and controlling costs, adherence to contract schedules, administrative aspects of performance, reasonable and cooperative behavior, commitment to customer satisfaction, and business-like concern for the interest of the customer.

Attachment 1 – ITES-3S Task Order Request Checklist and Instructions – Example

This form constitutes a request for contract support under the ITES-3S contracts. The RA shall complete this form, together with the associated Ordering Guide attachments, and forward the entire package to the appropriate ordering contracting officer for processing.

1. Task Order (TO) Title.	
2. RA Point of Contact. Include name, title, organization, commercial and DSN phone numbers for voice and fax, and e-mail address:	
3. Designated Order Contracting Officer Representative (COR). Include name, title, organization, commercial and DSN phone numbers for voice and fax, and e-mail address (If same as block 2, type "same"):	
4. Attachments Checklist. Complete package must include the following items. Send files electronically via e-mail or fax to the ordering contracting officer. <ul style="list-style-type: none"> <input type="checkbox"/> Work Statement (check one) <ul style="list-style-type: none"> <input type="checkbox"/> Statement of Work <input type="checkbox"/> Performance Work Statement includes Quality Assurance Surveillance Plan <input type="checkbox"/> Statement of Objectives <input type="checkbox"/> Funding Document(s) (scanned or other electronic version is preferable) <input type="checkbox"/> Independent Government Cost Estimate <input type="checkbox"/> Proposal Evaluation Plan Bundling Determination (if needed) <input type="checkbox"/> Consolidation Determination (if needed) <input type="checkbox"/> Justification for Work Statement that is not Performance-Based <input type="checkbox"/> TO unique DD Form 254 (only if security requirements) 	
5. TO Information Contract Type (check one) Time and Materials (T&M) and CR contract types require justification in accordance with (IAW) FAR (the ordering contracting officer makes the final determination of which order type is in the best interest of the government). <ul style="list-style-type: none"> <input type="checkbox"/> FFP (no justification required) <input type="checkbox"/> CR (provide justification in the box, below) <input type="checkbox"/> T&M (provide justification in the box, below) Rationale: T&M and CR contract types require justification IAW FARs.	
Federal Acquisition Streamlining Act (FASA) Exception. If you are citing a FASA exception to fair opportunity competition, designate which one below with a justification.	
FASA Exception Justification: <ul style="list-style-type: none"> <input type="checkbox"/> The agency need for services is of such urgency that providing such opportunity would result in unacceptable delays. <input type="checkbox"/> Only one such contractor is capable of providing services required at the level of quality required because they are unique or highly specialized. <input type="checkbox"/> The order should be issued on a sole-source basis in the interest of economy and efficiency as a logical follow-on to an order already issued under this contract, provided that all ITES-3S contractors were given a fair opportunity to be considered for the original order. <input type="checkbox"/> A statute expressly authorizes or requires that the purchase be made from specified source. 	
6. Order COR Training Certification: Army Order CORs are required to have COR training prior to appointment IAW paragraph 1.7 of the Army Contracting Command (ACC) Acquisition Instruction. Appendix A of the ACC Acquisition Instruction contains a list of ACC-approved training courses. Refer to: https://arc.army.mil/COR/CORHandbooks_SelfServe.aspx	
Order COR Training Certification Date:	

Attachment 2 – Performance-Based Service Acquisition

1. General

Performance-Based Service Acquisition (PBSA) is the preferred method of contracting for services and supplies. PBSA means an acquisition structured around the results to be achieved as opposed to the manner by which the work is to be performed. Essential elements of PBSA include: (1) performance requirements, expressed in either a performance work statement (PWS) or statement of objectives (SOO). Performance requirements should be described in terms of what the required output is and should not specify how the work is to be accomplished; (2) Performance standards or measurements, which are criteria for determining whether the performance requirements are met; (3) Appropriate performance incentives, either positive or negative; and (4) A surveillance plan that documents the Government’s approach to monitoring the contractor’s performance. These elements are discussed further below.

2. Policy

FAR 37.102 has established the policy to use a PBSA approach, to the maximum extent practicable, for all services. Services exempted from this policy are: architect-engineer, construction, utility, and services that are incidental to supply purchases. Use of any other approach has to be justified to the ordering contacting officer. For Defense agencies, DFARS 237.170-2 requires higher-level approval for any acquisition of services that is not performance-based.

3. Contract-Type

The order of precedence set forth in FAR 37.102(a)(2) must be followed for all Task Orders (TOs). It is:

- A FFP, performance-based contract or TO.
- A performance-based contract or TO that is not FFP.
- A contract or TO that is not performance-based. Requiring activities should use the contract type most likely to motivate contractors to perform at optimal levels. FFP is the preferred contracting type for PBSA. Work statements should be developed in sufficient detail to permit performance on a fixed-price basis.

4. Performance Work Statements

The PWS identifies the technical, functional, and performance characteristics of the Government’s requirements. The PWS describes the work in terms of the purpose of the work to be performed rather than either how the work is to be accomplished or the number of hours to be provided. The format for the PWS is similar to the traditional statement of work. In addition, the PWS will include performance standards, incentives, and a QASP:

Performance Standards/Metrics

Reflects level of service required by the Government to meet performance objectives. Standards may be objective (*e.g.*, response time) or subjective (*e.g.*, customer satisfaction). They must also:

- Use commercial standards where practicable, *e.g.*, ISO 9000
- Ensure the standard is needed and not unduly burdensome
- Must be measurable, easy to apply, and attainable

If performance standards are not available, the PWS may include a requirement for the contractor to provide a performance matrix, as a deliverable, to assist in the development of performance standards for future TOs.

Performance Incentives

Incentives may be positive or negative, monetary or non-monetary.

***NOTE:** If a financial incentive is promised, ensure that adequate funds are available at time of TO award to pay incentives that may be earned.*

Examples of monetary incentives include:

- Incentive fees
- Share-in-savings
- A negative incentive can be included if the desired results are not achieved (deduction should be equal to the value of the service lost).

Examples of non-monetary incentives include:

- Revised schedule
- Positive performance evaluation
- Automatic extension of contract term or option exercise
- Lengthened contract term (award term contracting) or purchase of extra items (award purchase)

QASP

The QASP is a plan for assessing contractor performance to ensure compliance with the Government's performance objectives. It describes the surveillance schedule, methods, performance measures, and incentives.

The level of surveillance should be commensurate with the dollar amount, risk, and complexity of the requirement.

Don't inspect the process, just the outputs.
QASP is included as part of the PWS.

A PWS sample format, including a QASP, is provided as Ordering Guide Attachment 4.

5. SOO

The SOO is an alternative to the PWS. It is a very brief document (commonly two to 10 pages, depending upon complexity, although there is no maximum or minimum length) that summarizes key agency goals and outcomes, to which contractors respond. It is different from a PWS in that, when a SOO is used, offerors are asked to develop and propose a PWS as part of their solution. Typically, offerors would also propose a technical approach, performance standards, incentives/disincentives, and a QASP, based upon commercial practices. At a minimum, a SOO must contain the following information:

- Purpose.
- Scope or mission.
- Period and place of performance.
- Background.
- Performance objectives (i.e., required results)
- Any operating constraints.

Upon award, the winning offeror's solution to the SOO should be incorporated into the resulting TO. The SOO itself is not part of the TO.

A SOO sample format is provided as Attachment 5.

Attachment 3 - Format for ITES-3S Statement of Work (SOW) – Example

1. **Project Description:** Provide a short, descriptive title of the work to be performed.
2. **Background:** Describe the need for the services, the current environment, and the office’s mission as it relates to this requirement. Provide a brief description/summary of the services sought.
3. **Scope:** Indicate which ITES-3S contract task area(s) apply to the work to be performed. Include a high- level view of the procurement, its objectives, size, and projected outcomes. Do not include anything that won’t contribute to the expected result. Do include impacts/implications.
4. **Applicable Publications:** List legal, regulatory, policy, security, etc. documents that are relevant. Include publication number, title, version, date, where the document can be obtained, etc. If only portions of documents apply, so state.
5. **Specific Tasks:** Provide a narrative of the specific tasks that make up the SOW. Number the tasks sequentially, *e.g.*, Task 1 - Title of Task and description, Task 2 - Title of Task and description, etc. Describe in clear terms, using active language, what work will be performed. The requirement must be defined sufficiently for the contractor to submit a realistic proposal and for the Government to negotiate a meaningful price or estimated cost. SOWs must be “outcome-based,” *i.e.*, they must include the development and delivery of actual products (*e.g.*, assessment report, migration strategy, implementation plan, etc.).
6. **Deliverables and Delivery Schedule:** List all outputs/outcomes with specific due dates or time frames. Include media type, quantity, and delivery point(s). State due dates in terms of calendar days after task order award.
7. **Government-furnished Equipment and Information (GFE/GFI):** Identify the Government-furnished equipment and information, if any, to be provided to the contractor, and identify any limitations on use. Be as specific as possible.
8. **Place of Performance:** Specify whether the work will be performed at the contractor’s site or at a Government site, with exact address if possible. Describe any local or long distance travel the contractor will be required to perform.
9. **Period of Performance:** State the period of performance in terms of total calendar days after TO award (*e.g.*, 365 calendar days after TO award), or in terms of start and end date, *e.g.*, October 1, 20XX through September 30, 20XX. The use of “calendar days” provides an accurate understanding of the actual length of the TO and allows the actual dates of performance to be set at the time of TO award.
10. **Security:** State whether the work will be UNCLASSIFIED, CONFIDENTIAL, SECRET, TOP SECRET or TOP SECRET SCI and include Contract Security Classification Specification, DD Form 254, as required in individual TOs.

Attachment 4 - Format for ITES-3S Performance Work Statement (PWS) – Example

1. **Project Title/Description:** Provide a short, descriptive title of the work to be performed.
2. **Organization and Mission:** Provide complete Customer/Agency name, address, and mission.
3. **Background:** Describe the need for the services, the current environment, and the office's mission as it relates to this requirement. Provide a brief description/summary of the services sought.
4. **Scope:** Indicate which ITES-3S contract task area(s) apply to the work to be performed. Include a high-level view of the procurement, its objectives, size, and projected outcomes. Do not include anything that won't contribute to the expected result. Do include impacts/implications.
5. **Applicable Publications:** List legal, regulatory, policy, security, etc. documents that are relevant. Include publication number, title, version, date, where the document can be obtained, etc. If only portions of documents apply, so state.
6. **Performance Requirements/Tasks/Services:** Provide a narrative of the specific performance requirements or tasks that make up the PWS. Describe the work in terms of the required output, i.e., what is expected from the contractor, rather than how the work is to be accomplished or the number of hours to be provided. Number the tasks sequentially, *e.g.*, Task 1 - Title of Task and description, Task 2 - Title of Task and description, etc. The requirement must be defined sufficiently for the contractor to submit a realistic proposal and for the Government to negotiate a meaningful price or estimated cost.
7. **Performance Standards:** Performance standards establish the performance levels required by the Government. Specify industry-specific standards that are relevant to performing the work. Examples of performance standards:
 - **Quality Standards:** Condition, Error rates, Accuracy, Form/Function, Reliability, Maintainability
 - **Quantity Standards:** Capacity, Output, Volume, Amount
 - **Timeliness Standards:** Response times, Delivery, Completion times, Milestones
8. **Incentives:** Incentives should be used when they will encourage better quality performance. They may be either positive, negative or a combination of both. Incentives may be monetary or non-monetary. Incentives do not need to be present in every performance-based contract as an additional fee structure. In a fixed price contract, the incentives would be embodied in the pricing and the contractor could either maximize profit through effective performance or have payments reduced because of failure to meet the performance standard.
 - Positive Incentives - Actions to take if the work exceeds the standards. Standards should be challenging, yet reasonably attainable.

- Negative Incentives - Actions to take if work does not meet standards.

9. Deliverables and Delivery Schedule: List all outputs/outcomes with specific due dates or time frames. Include media type, quantity, and delivery point(s). State due dates in terms of calendar days after TO award.

10. Government-furnished Equipment and Information (GFE/GFI): Identify the Government-furnished equipment and information, if any, to be provided to the contractor, and identify any limitations on use. Be as specific as possible. If GFE is to be provided, identify safety issues.

11. Place of Performance: Specify whether the work will be performed at the contractor's site or at a Government site, with exact address if possible. Describe any local or long distance travel the contractor will be required to perform.

12. Period of Performance: State the period of performance in terms of total calendar days after TO award (*e.g.*, 365 calendar days after TO award), or in terms of start and end date, *e.g.*, October 1, 20XX through September 30, 20XX. The use of "calendar days" provides an accurate understanding of the actual length of the TO, and allows the actual dates of performance to be set at the time of TO award.

13. Security: State whether the work will be UNCLASSIFIED, CONFIDENTIAL, SECRET TOP SECRET or TOP SECRET SCI. and include Contract Security Classification Specification, DD Form 254, as required in individual TOs.

14. Quality Assurance Surveillance Plan (QASP): This portion of the PWS explains to the contractor what the Government's expectations are, how (and how often) deliverables or services will be monitored and evaluated, and incentives that encourage the contractor to exceed the performance standards and that reduce payment or impose other negative incentives when the outputs/outcomes are below the performance standards. Attach the QASP to the PWS. An example is provided on the next page.

Attachment 4A **Quality Assurance Surveillance Plan (QASP) – Example**

1. **Task Order Title:** Mainframe Maintenance Service (*Example*)

2. **Work Requirements:** (*list below the tasks specified in Paragraph 5 of the PWS*)

Examples:

- Task 1 - Predictive/Preventive Maintenance
- Task 2 - Equipment Repair
- Task 3 - Dispatch Center
- Task 4 - Work Documentation/Service Log Section
- Task 5 - Equipment Monitoring Section
- Task 6 - Configuration Management Section

3. **Primary Method of Surveillance:** (*choose a method that best fits your requirement, e.g., criticality of work to be performed, the relative importance of some tasks to others, lot size/frequency of service, surveillance period, stated performance standard, performance requirement, availability of agency people/resources, and cost-effectiveness of surveillance vs. task importance.*)

Acceptable surveillance methods include:

100 Percent Inspection. This is recommended only where health and safety are at issue; otherwise, it is not cost-effective and is too stringent.

Random Sampling. Appropriate for recurring tasks or productions requirements.

Periodic Inspection. Use a pre-determined plan based on analyses of agency resources and requirements.

Customer Input. Suitable for service-oriented tasks; use a standard form to document.

Contractor Self-Reporting. Appropriate for tasks like system maintenance where the contractor can provide system records that document performance; for development projects, monthly reports can detail problems encountered.

Example: Random sampling is scheduled for Items 2, 3, 5 and 6. There will be 100% inspection for Items 1 and 4.

4. **Scope of Performance:** (*provide the scope of the requirement as described in Paragraph 3 of the PWS*)

Example: The contractor will provide remedial maintenance service on-site with problem resolution completed within the specified timeframe. Remedial maintenance is defined to include service, including parts replacement, as necessary to restore equipment that is in an inoperable or degraded condition to normal operating effectiveness. Equipment problems attributed to software malfunctions are excluded.

(insert other scope statements for remaining work requirements, as appropriate)

5. Performance Standards: *(insert the Performance Standards listed in Paragraph 6 of the PWS)*

Examples:

Mainframe processing availability must be 95% during the hours 0800 - 1600
Response times for maintenance calls should occur within 4 hours of placing a call

6. Acceptable Quality Level (AQL): *(must be realistic, stating the minimum standard, percentage of errors allowed, cost trade-offs, etc.)*

Example: The AQL for this project is 100% due to the critical support provided by mainframe operations.

7. Evaluation Method:

Example: The COTR will document the time of verbal notification to the contractor. The COTR will document the official time and date of notification on the Maintenance Call Record. The COTR will review self-diagnostic systems logs, conduct a comparison with actual maintenance performance and otherwise verify and validate contractor performance. The contractor shall enter in the record the official time the system is restored to full operational status. The COTR will confirm the date and time of problem resolution in the record.

8. Incentives (Positive and/or Negative): *(insert the Performance Incentives listed in Paragraph 7 of the PWS)*

Example: The following negative incentives apply:

If resolution is completed within 4 hours of notification, there will be no adjustment to the invoice amount.

If resolution time exceeds 4 hours, the monthly invoice amount will be reduced by 10%.

(insert any other appropriate incentives, or disincentives)

Attachment 5 – Statement of Objectives (SOO) – Example

The Statement of Objectives (SOO) provides basic, top-level objectives of a task order, and is provided in lieu of a government-written statement of work (SOW) or Performance Work Statement (PWS). It provides contractors the flexibility to develop cost-effective solutions and the opportunity to propose innovative alternatives meeting the objectives.

FORMAT

1.0 Overall Objectives:

- Personnel – Present a proper skill mix, experience, and required number of qualified personnel to maintain performance standards and accomplish required services within specified time frames. Capable of working independently and with demonstrated knowledge, skills, and expertise in their respective functional areas, which are necessary to perform all assigned duties.
- Materials – Provide all necessary supplies, spares, tools, and test equipment, consumables, hardware, software, automatic data processing equipment, documentation, and other applicable properties.
- Facilities – Provide administrative and workspaces.
- Organizational Processes – Provide internal controls, management oversight, and supply support.

2.0 Task Order Objectives:

Most objectives will already be identified within the contract document. You may include specific task order objectives here. If you do include this type of objective, you may need to include instructions for how you wish the ITES-3S contractors to address these objectives within their proposals. Objectives identified within the SOO are addressed by the ITES-3S contractors within a SOW, which they write. Therefore, consider how objectives identified in this section could be addressed within a SOW.

3.0 Engineering/Technical Objectives:

- Allows for new technology insertion
- Make maximum use of commercial products.
- Install the system with a minimum impact to other systems that may be located in the designated facility.
- Develop and document procedures for managing system engineering, software, and hardware development. Utilize commercial standards and procedures to the

maximum extent in achievement of this objective. The system engineering process includes parts management, quality assurance, Electro-Static Discharge (ESD) control, reliability, maintainability, system safety, etc.

- Provide the latest possible technology available when the system is delivered. Ensure hardware technology advances can be easily incorporated throughout the delivery schedule.

4.0 Program Management Objectives:

- Establish a program management system based on the Integrated Master Plan/Integrated Master Schedule that provides accurate and timely schedule and performance information throughout the life cycle of the program.
- Establish a sound risk management system, which mitigates program risks and provides for special emphasis on software development efforts through integration of metrics to monitor program status.
- Establish a comprehensive configuration management system.
- Obtain sufficient rights in technical data, both software and hardware, such that the Government can maintain and modify the training system using Government personnel and third-party contractors.
- Use electronic technologies to reduce paper copies of program information generated throughout the life of this contract.
- Use electronic technologies to communicate and pass data between government and contractor organizations.

5.0 Operating or Programmatic Constraints:

The following specifications, standards, policies, and procedures represent the constraints placed on this Task Order:

Specify as applicable.

Attachment 6 – ITES-3S Proposal Evaluation Plan

(Check One):

- Best Value Trade-Off**
- Lowest Price, Technically Acceptable**

Non-Price Factors

***NOTE:** Describe the relative weight of each evaluation factor compared with the other evaluation factors. For example, the evaluation factors might all be approximately equal in importance, or one factor may be more important than other factors.*

List the specific areas of your technical/management requirements to be evaluated. These areas should correspond with, and relate to, specific requirements

Technical / Management Approach

List the specific areas of your past performance requirements to be evaluated.

Past Performance

These areas should relate to specific work statement requirements.

Other Factors (if applicable)

List any other evaluation criteria important to you and the associated weights below.

Price Factors

Adjectival ratings (*e.g.*, outstanding, good, etc.) are assigned to corporate experience, technical/ management approach, and any other non-price criteria for which you may want to evaluate contractor proposals.

NOTE that balancing price against non-price factors facilitates a best value trade-off decision, and, as a result, a rating is not assigned to the price factor. Indicate whether all non-price evaluation factors, when combined are:

- Significantly more important than the price factor
- More important than the price factor
- Comparatively equal to the price factor
- Less important than the price factor
- Significantly less important than the price factor

Attachment 7 – Letter Request for Task Order Proposals

LETTERHEAD

IN REPLY REFER TO:

(DATE) MEMORANDUM TO: Information Technology Enterprise Solutions – 3 Services
(ITES-3S) Contractors

SUBJECT: Request for Task Order (TO) Proposals

1. The Network Enterprise Center for **[insert command]** has a requirement for **[insert, as appropriate]**. The period of performance is **[insert duration of order]**. The anticipated contract type is **[insert as appropriate]**. This requirement has been assigned tracking number **[insert number]**.
2. It is requested that you submit written technical and price proposals in response to the attached **[insert, as appropriate, e.g., statement of work, performance work statement, or statement of objectives]** (Ordering Guide Attachment 1). Specific proposal instructions and evaluation criteria are also attached (Ordering Guide Attachment 2). Your proposal or “no-bid reply” shall be submitted no later than **[insert date/time]**. Any “no-bid reply” must include a brief statement as to why you are unable to perform. Please upload your proposal or no bid reply to the Computer Hardware, Enterprise Software and Solutions IT e-mart at: <https://chess.army.mil>
3. Virtual Reading Room. A Virtual Reading Room has been established to provide access to information related to this acquisition ***[insert specific information as appropriate]***.
4. Due Diligence. As part of the proposal preparation process, the Government will offer the ITES-3S contractors the opportunity for Due Diligence. This will enhance your understanding of the requirements, and is in keeping with the principles identified by FAR Part 15.201, Exchanges with Industry before Receipt of Proposals. The following arrangements have been made for interested contractors to contact appropriate Government representatives to ask questions that by their very nature they would not ask if the response would be posted and provided to their competition: ***[insert information, as appropriate]***.
5. Resolution of Issues. The ordering contracting officer reserves the right to withdraw and cancel the proposed task. In such event, the contractor shall be notified in writing of the ordering contracting officer’s decision. This decision is final and conclusive and shall not be subject to the “Disputes” clause or the “Contract Disputes Act.”
6. Questions should be addressed to the ordering contracting officer at the following e-mail address: ***[insert address]***. Please provide any questions no later than ***[insert date/time]***. Questions received after this date may or may not be answered. Contact ***[insert name/telephone number]*** if you have any questions or require additional information.

Sincerely,

ITES-3S Ordering Contracting Officer

Attachments:

- (1) Work Statement
- (2) Proposal Submission Instructions and Evaluation Criteria

Attachment 8 – Proposal Submission Instructions and Evaluation Criteria

1. Proposal Submission Instructions.

Technical and Price Proposals shall be separate documents and consist of the following tabs:
NOTE: While the Technical Proposal must not contain any reference to price, resource information (such as data concerning labor hours and categories, materials, subcontracts, etc.) must be provided so that a contractor's understanding of the requirements may be evaluated.

- **TAB 1 - Technical Proposal.**

Technical proposal information will be streamlined. Page limits are specified below. As a minimum, technical proposals shall address the following elements:

- Technical/Management Approach
- Key Personnel Assigned
- Teaming Arrangements (including subcontractors)
- Risks and Risk Mitigation Plan
- Period of Performance
- Government-Furnished Equipment (GFE)/Government-Furnished Information (GFI)
- Security (including clearance level)
- Other Pertinent Data (**10 pages**)

NOTE: If instructions are for a performance-based task order, and if a Performance Work Statement (PWS) is not already included in the solicitation, the Technical Proposal shall also include the offeror's proposed Statement of Work (SOW) or PWS detailing the performance requirements resulting from the Statement of Objectives (SOO). (No Page Limit)

- **TAB 2 – Cost/Price Proposal.**

This part of the proposal shall include details for all resources required to accomplish the requirements (e.g., labor hours, rates, travel, incidental equipment, etc.). The price proposal shall identify labor categories in accordance with the Labor Rate Tables contained in Section B. It must also identify any GFE and/or GFI required for task performance. If travel is specified in the SOW or PWS, airfare and/or local mileage, per diem rates by total days, number of trips and number of contractor employees traveling shall be included.

2. Evaluation Criteria.

This is a best value award, and the evaluation criteria for this award will be based on the following factors and weights assigned to each factor.

Insert criteria as appropriate; describe the relative weight of each evaluation factor compare with the other evolution factors. For example, the evaluation factors may be approximately equal in importance or one factor may be more important than others.

a. Technical/Management Approach:

- (1)
- (2)
- (3)

b. Past Performance:

- (1)
- (2)
- (3)

c. Other Factors:

- (1)
- (2)
- (3)

d. Cost/Price. In performing the best value trade-off analysis, all non-price evaluation factors, when combined, are APPROXIMATELY EQUAL IN IMPORTANCE TO cost/price.

Attachment 9 – ITES-3S Selection Recommendation Document – Example

1. Task Order (TO) Title. (Enter the title as shown in the work statement.)	
2. Recommended Prime Contractor. Check the name/number of the ITES-3S prime contractor for whom you are recommending an award.	Fill in Contractor Name and Contract Number. (Example: Contractor ABC – Contractor #123) <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
3. Justification. NOTE: <i>The “Fair Opportunity to be Considered” evaluation and justification is mandatory unless the requirement meets one of the five FASA – specified/Section 803 exceptions described in part 4 below. If one of the exceptions applies, leave section 3 blank and complete sections 4 and 5.</i>	Attach a narrative summarizing the evaluation results, including the adjectival ratings for each non-price evaluation factor and the identified strengths and weaknesses of the proposals received. Describe the evaluation methodology and the best value analysis that led to the recommendation of the prime contractor that should be awarded the TO the ITES-3S Proposal Evaluation Plan. The justification should be streamlined while containing the following: <ol style="list-style-type: none"> 1. Results of Non-Price Evaluations: Discuss the results of the non-price evaluations for each vendor that submitted a proposal. 2. Results of Price Evaluations: Discuss the results of the price evaluations for each vendor that submitted a proposal. 3. Trade-off Analysis: Describe the analysis that led to the recommendation of the prime contractor that should be awarded the TO.
4. Exception: NOTE: <i>Complete section 4 only if an exception to the “Fair Opportunity to be Considered” process is being claimed.</i>	If the specific requirements meet the criteria for one of the five FASA-allowed (Section 803) exceptions to the Fair Opportunity and the TO is, therefore, exempt from the evaluation described in section 3 above, check the appropriate exception and provide justification for why this TO is exempt from Fair Opportunity. <ol style="list-style-type: none"> 1. The agency has such urgent need for services that providing such opportunity would result in unacceptable delays. (<i>Attach Justification</i>) 2. Only one contractor is capable of providing such services required at the level of quality required because the services ordered are unique or highly specialized. (<i>Attach Justification</i>) 3. The order should be issued on a sole-source bases in the interest of economy and efficiency as a logical follow-on to a TO already issued under the ITES-3S contract, provided that all contractors were given “Fair Opportunity to be Considered” for the original order. (<i>Enter the contract and TO number of the original TO.</i>) Contract W52P1J-18-D-A139, TO 4. It is necessary to place an order to satisfy a minimum guarantee. 5. A statute expressly authorizes or requires that the purchase be made from a specified store.
5. Authorized Official:	Selection Recommendation Document must be signed by the authorized selection official, e.g. ordering contracting officer. Electronic signature (/s//) is acceptable.
Name, Signature and Date:	

Attachment 10 – ITES-3S Acronyms Below is a list of acronyms pertinent to TekSynap’s ITES-3S Ordering Guide:

- ACC-RI - Army Contracting Command - Rock Island
- ACRN - Accounting Classification Reference Number
- AFARS - Army FAR Supplement
- BPA – Blank Purchase Agreement
- CHESS – Computer Hardware Enterprise Software and Solutions
- CLINs - Contract Line Items
- COR - Contracting Officer Representative
- COTR - Contracting Officer's Technical Representative
- COTS - Commercial Off-the-Shelf
- CR - Cost Reimbursement
- DD - Defense Department
- DFARS - Defense FAR Supplement
- DoD - Department of Defense
- ESI - Enterprise Software Initiative
- FAE - Functional Area Expert
- FAR - Federal Acquisition Regulation
- FASA - Federal Acquisition Streamlining Act
- FFP - Firm Fixed Price
- FY - Fiscal Year
- GAO - Government Accountability Office
- GFE - Government Furnished Equipment
- GFI - Government Furnished Information
- IAW - In Accordance With
- ID/IQ - Indefinite Delivery/Indefinite Quantity
- IT - Information Technology
- ITES-3S – Information Technology Enterprise Solutions – 3 Services

- NDAA - National Defense Authorization Act
- OCO – Ordering Contracting Officer
- OCOR – Ordering Contracting Officer Representative
- ODC - Other Direct Charges
- PBSA - Performance-Based Service Acquisition
- PCO- Procuring Contracting Office
- POC - Point of Contact
- PWS - Performance Work Statement
- QASP - Quality Assurance Surveillance Plan
- RA - Requiring Activity
- RFP - Request for Proposal
- SME - Subject Matter Expert
- SoNA – Statement of Non-Availability
- SOO - Statement of Objectives
- SOW - Statement of Work
- T&M - Time and Materials
- TO - Task Order
- TOR - Task Order Request

Attachment 11 – Commercial Cloud Computing. The following processes, roles, and responsibilities will assist application owners and contracting personnel in using the ITES-3S contract vehicle to acquire modernization, transition, hosting, and sustainment services required to migrate applications and systems to a commercial cloud environment. The cloud hosting characteristics supported by ITES-3S include:

Software as a Service (SaaS); Platform as a Service (PaaS); and Infrastructure as a Service (IaaS) service models.

Private cloud; Community cloud; Public cloud; and Hybrid cloud deployment models.

Impact Levels 2, 4, 5, and 6

ITES-3S is a contract vehicle option available to Army and other DoD services looking to modernize, migrate, host, and sustain systems/applications in a commercial cloud environment. ITES-3S task orders (TOs) will define the systems/applications being modernized and migrated from their current operational environment to a commercial cloud service offering (CSO). Cloud services available on ITES-3S include the following:

Modernization Support Services: Modernization may be required as part of migration support services. Application modernization updates an application’s design to take advantage of cloud technology. In this case, modernizing systems/applications to migrate to commercial cloud hosting environments.

Migration Support Services: Cloud migration support activities may include, application analysis, security requirements analysis, documentation, virtualization, technical engineering, migration scheduling, business process reengineering, data preparation, migration planning, interface/service transition planning, training, cutover planning, back out planning, and go-live support.

Cloud Hosting Services: The Contractor will provide the cloud hosting services in accordance with a valid DoD Cloud Provisional Authorization (PA) for the proposed CSO. ITES-3S vendors will be required to provide evidence of a valid DoD PA for the CSO they are proposing for a cloud hosting requirement. A DoD PA is not required to be presented if the hosting requirement is for an on-premise, private, or hybrid cloud environment or for a modernization.

Sustainment Services: Sustainment services include requirements to support and maintain the capabilities of a system/application in a production environment. This includes processes, procedures, people, materials, and information required to support and maintain the system/application. Software maintenance generally includes licensing, support, and maintenance of COTS software.

Other General Provisions:

Cloud Service Providers (CSP) are required to adopt and maintain security (management, operational, technical) and privacy requirements for the impact level of the CSO being provided in accordance with FedRAMP and the Cloud Computing Security Requirements Guide (CC SRG). If security controls/requirements for the DoD PA change, CSPs will need to comply with the changes

to retain their DoD PA. CSPs shall be compliant with the security standards required to maintain the following authorizations and requirements:

Maintain compliance with FedRAMP including all federal laws, directives, policies, FIPS standards, NIST guidance, and security requirements identified in the FedRAMP Moderate baseline security controls.

ITES-3S task orders will only be executed with a Contractor who provides evidence of a valid DoD PA for the CSO being proposed. The CC SRG (Section 4.3) states, "Each CSO must be granted a DoD PA in order to host DoD mission systems."

Commercial cloud computing requirements shall include the appropriate level of security in the individual Task Order Requests (TORs). If necessary, based on the level of classification, a DD Form 254, Contract Security Classification Specification, shall be prepared and included in the TOR and resulting order.

Roles and Responsibilities:

ENTERPRISE CLOUD MANAGEMENT OFFICE (ECMO)

Monitors and evaluates all task orders on behalf of the COR for technical/operational execution (government task).

Coordinates with operational stakeholders to obtain required funding for the implementation of management solutions to enable ECE operations.

Leverages Army Application Migration Business Office (AAMBO) (or AAMBO-like functional offices) to ensure a consistent and effective migration of applications for the application owners and the Army.

ARMY APPLICATION MIGRATION BUSINESS OFFICE (AAMBO)

The AAMBO contacts are available to provide support to Army application owners from a requirements perspective and shall perform the following for Army customers.

Functions as the single point of entry for all Army enterprise system and application migration efforts.

Assists capability owners by providing tools and guidance for gathering technical requirements.

Provides a detailed analysis of the system or application's attributes and development of a migration support strategy. Once AAMBO receives complete technical information, a migration support team, which consists of project manager, application engineer, system engineer, and a cybersecurity subject matter expert, is assigned to the capability owner to guide them through the migration process.

ARMY CAPABILITY OWNER

Identifies and coordinates with the contracting officer (KO) who will support the application cloud migration effort.

Prepares required acquisition documents to include the task order PWS and any other documents required by the contracting officer.

Defines requirements and justifies to the contracting officer that the requested work is within scope of the ITES-3S contract vehicle.

Ensures notification of total estimated value of the task order award to the contracting office.

Funds the work to be performed under. All funding for cloud services should be OMA.

Conducts proposal evaluation (cost, past performance, and technical) in conjunction with the contracting office.

ARMY CONTRACTING COMMAND – ROCK ISLAND (ACC-RI)

Serves as the PCO for the ITES-3S base contracts. The PCO has overall contractual responsibility for the ITES-3S contracts. All orders issued are subject to the terms and conditions of the contract. The contract takes precedence in the event of conflict with any order or the Ordering Guide.

Provides advice and guidance to Requiring Activities (RA), Ordering Contracting Officers (OCOs), and contractors regarding contract scope, acquisition regulation requirements, and contracting policies.

Approves and issues base ITES-3S contract modifications.

Represents the Contracting Officer position at various contract-related meetings.

ORDERING CONTRACTING OFFICER (OCO)

OCOs within the Army, DoD, and other Federal agencies are authorized to place orders within the terms of the contract and within the scope of their authority.

Not authorized to make changes to the contract terms and/or conditions. The OCOs authority is limited to the individual orders.

Serves as the interface between the contractor and the Government for individual orders issued under the ITES-3S contracts.

Responsible for determining if bundling of requirements (see FAR 2.101) is in compliance with FAR 7.107.

Responsible for determining whether consolidation of requirements, compliance, and approval are IAW DFARS 207.170.

Responsible for requesting, obtaining, and evaluating proposals/quotations and for obligating funds for orders issued.

The OCO reserves the right to withdraw and cancel a task if issues pertaining to the proposed task arise that cannot be satisfactorily resolved.

Responsible for identifying when Earned Value Management System is applicable at the TO level IAW DFARS 252.234-7002.

TASK ORDER CORs:

Task Order CORs will be designated by letter of appointment from the OCO.

Serves as the focal point for all task activities, and primary POC with the contractors.

Provides technical guidance in direction of the work; not authorized to change any of the terms and conditions of the contract or order.

Shall use the measures and standards set forth in the Quality Assurance Surveillance Plan (QASP) to assess contractor performance, thereby ensuring the quality of services required by the TO are met.

Obtains required COR training. Note: The ACC COR Guide provides a list of approved COR training courses:

<https://www.esd.whs.mil/Portals/54/Documents/DD/issuances/dodi/500072p.pdf?ver=2018-09-26-083124-387>

ACCENT PROGRAM OFFICE:

Provides direct support to application owner's acquisition and contracting efforts.

Functions as a primary point of entry for all Army system and application migration acquisition and contracting efforts.

Assists capability owners by providing tools and guidance for developing acquisition and contracting documentation.

Tracks task order award information and reports to ITES-3S program office.

CONTRACTORS

Contractors shall perform services and/or deliver related products that meet requirements and/or achieve objectives/outcomes described in orders issued under the ITES-3S contracts.

Attachment 12 – TekSynap ITES-3S Labor Categories and Rates (Government Site)

Labor Category	YR 1 – (9/25/18 – 9/24/19)	YR 2 – (9/25/19 – 9/24/20)	YR 3 – (9/25/20 – 9/24/21)	YR 4 – (9/25/21 – 9/24/22)	YR 5 – (9/25/22 – 9/24/23)	YR 6 – (9/25/23 – 9/24/24)	YR 7 – (9/25/24 – 9/24/25)	YR 8 – (9/25/25 – 9/24/26)	YR 9 – (9/25/26 – 9/24/27)
Program Management									
Program Manager - Senior	\$136.63	\$140.73	\$144.95	\$149.30	\$153.78	\$158.39	\$163.14	\$168.04	\$173.08
Program Manager - Intermediate	\$74.50	\$76.74	\$79.04	\$81.41	\$83.85	\$86.37	\$88.96	\$91.63	\$94.37
Program Manager - Associate	\$53.63	\$55.24	\$56.90	\$58.60	\$60.36	\$62.17	\$64.04	\$65.96	\$67.94
Project Management									
Project Manager - Senior	\$118.01	\$121.55	\$125.20	\$128.95	\$132.82	\$136.81	\$140.91	\$145.14	\$149.49
Project Manager - Intermediate	\$70.95	\$73.08	\$75.27	\$77.53	\$79.85	\$82.25	\$84.72	\$87.26	\$89.88
Project Manager - Associate	\$54.31	\$55.94	\$57.62	\$59.35	\$61.13	\$62.96	\$64.85	\$66.79	\$68.80
Enterprise Architect	\$94.30	\$97.13	\$100.04	\$103.04	\$106.14	\$109.32	\$112.60	\$115.98	\$119.46
Business Analyst -- Functional	\$78.05	\$80.39	\$82.80	\$85.29	\$87.85	\$90.48	\$93.20	\$95.99	\$98.87
Business Analyst -- Technical	\$50.09	\$51.59	\$53.14	\$54.73	\$56.38	\$58.07	\$59.81	\$61.60	\$63.45
Project Administrator	\$65.59	\$67.56	\$69.58	\$71.67	\$73.82	\$76.04	\$78.32	\$80.67	\$83.09
Project Administrator - Associate	\$31.97	\$32.93	\$33.92	\$34.93	\$35.98	\$37.06	\$38.17	\$39.32	\$40.50
Facility Staff Support - Senior	\$86.37	\$88.96	\$91.63	\$94.38	\$97.21	\$100.13	\$103.13	\$106.22	\$109.41
Facility Staff Support - Intermediate	\$75.91	\$78.19	\$80.53	\$82.95	\$85.44	\$88.00	\$90.64	\$93.36	\$96.16
Facility Staff Support - Associate	\$57.58	\$59.31	\$61.09	\$62.92	\$64.81	\$66.75	\$68.75	\$70.82	\$72.94
Quality Assurance									
Quality Assurance Manager- Senior	\$65.59	\$67.56	\$69.58	\$71.67	\$73.82	\$76.04	\$78.32	\$80.67	\$83.09
Quality Assurance Analyst - Intermediate	\$49.61	\$51.10	\$52.63	\$54.21	\$55.84	\$57.51	\$59.24	\$61.01	\$62.84
Quality Assurance Analyst - Associate	\$35.40	\$36.46	\$37.56	\$38.68	\$39.84	\$41.04	\$42.27	\$43.54	\$44.84
IT Systems Architecture									
Chief Enterprise Architect	\$198.94	\$204.91	\$211.06	\$217.39	\$223.91	\$230.63	\$237.54	\$244.67	\$252.01
Lead Enterprise Architect	\$148.37	\$152.82	\$157.41	\$162.13	\$166.99	\$172.00	\$177.16	\$182.48	\$187.95
Senior IT Systems Solution Architect	\$115.13	\$118.58	\$122.14	\$125.81	\$129.58	\$133.47	\$137.47	\$141.60	\$145.84
Client/Server Network Architect	\$95.05	\$97.90	\$100.84	\$103.86	\$106.98	\$110.19	\$113.49	\$116.90	\$120.41
Software Architect	\$125.16	\$128.91	\$132.78	\$136.77	\$140.87	\$145.09	\$149.45	\$153.93	\$158.55
Systems Engineer - Senior	\$91.10	\$93.83	\$96.65	\$99.55	\$102.53	\$105.61	\$108.78	\$112.04	\$115.40
Systems Engineer - Intermediate	\$70.95	\$73.08	\$75.27	\$77.53	\$79.85	\$82.25	\$84.72	\$87.26	\$89.88
Systems Engineer - Associate	\$53.20	\$54.80	\$56.44	\$58.13	\$59.88	\$61.67	\$63.52	\$65.43	\$67.39
Network Engineer - Senior	\$122.01	\$125.67	\$129.44	\$133.32	\$137.32	\$141.44	\$145.69	\$150.06	\$154.56
Network Engineer - Intermediate	\$105.86	\$109.04	\$112.31	\$115.68	\$119.15	\$122.72	\$126.40	\$130.19	\$134.10
Network Engineer - Associate	\$82.43	\$84.90	\$87.45	\$90.07	\$92.78	\$95.56	\$98.43	\$101.38	\$104.42
Managed System Engineer - Senior	\$86.56	\$89.16	\$91.83	\$94.59	\$97.42	\$100.35	\$103.36	\$106.46	\$109.65
Managed Systems Engineer - Intermediate	\$65.32	\$67.28	\$69.30	\$71.38	\$73.52	\$75.72	\$78.00	\$80.34	\$82.75
Managed Systems Engineer - Associate	\$57.88	\$59.62	\$61.40	\$63.25	\$65.14	\$67.10	\$69.11	\$71.19	\$73.32
Application Systems									
Applications Systems Analyst - Senior	\$72.33	\$74.50	\$76.73	\$79.04	\$81.41	\$83.85	\$86.37	\$88.96	\$91.63
Applications Systems Analyst - Intermediate	\$55.31	\$56.97	\$58.68	\$60.44	\$62.25	\$64.12	\$66.04	\$68.02	\$70.07
Applications Systems Analyst - Associate	\$37.19	\$38.31	\$39.45	\$40.64	\$41.86	\$43.11	\$44.41	\$45.74	\$47.11
Software Engineer - Senior	\$122.74	\$126.42	\$130.21	\$134.12	\$138.14	\$142.29	\$146.56	\$150.95	\$155.48
Software Engineer - Intermediate	\$102.13	\$105.19	\$108.35	\$111.60	\$114.95	\$118.40	\$121.95	\$125.61	\$129.38
Software Engineer - Associate	\$70.94	\$73.07	\$75.26	\$77.52	\$79.84	\$82.24	\$84.71	\$87.25	\$89.86
Applications Programmer - Senior	\$75.64	\$77.91	\$80.25	\$82.65	\$85.13	\$87.69	\$90.32	\$93.03	\$95.82
Applications Programmer - Intermediate	\$55.31	\$56.97	\$58.68	\$60.44	\$62.25	\$64.12	\$66.04	\$68.02	\$70.07
Applications Programmer - Associate	\$35.40	\$36.46	\$37.56	\$38.68	\$39.84	\$41.04	\$42.27	\$43.54	\$44.84
IT Certified Professional - Senior	\$85.23	\$87.79	\$90.42	\$93.13	\$95.93	\$98.80	\$101.77	\$104.82	\$107.97
IT Certified Professional -Intermediate	\$68.26	\$70.31	\$72.42	\$74.59	\$76.83	\$79.13	\$81.51	\$83.95	\$86.47
IT Certified Professional - Associate	\$49.06	\$50.53	\$52.05	\$53.61	\$55.22	\$56.87	\$58.58	\$60.34	\$62.15

Labor Category	YR 1 - (9/25/18 - 9/24/19)	YR 2 - (9/25/19 - 9/24/20)	YR 3 - (9/25/20 - 9/24/21)	YR 4 - (9/25/21 - 9/24/22)	YR 5 - (9/25/22 - 9/24/23)	YR 6 - (9/25/23 - 9/24/24)	YR 7 - (9/25/24 - 9/24/25)	YR 8 - (9/25/25 - 9/24/26)	YR 9 - (9/25/26 - 9/24/27)
Operations and Logistics									
Seat Management Administrator	\$54.06	\$55.68	\$57.35	\$59.07	\$60.85	\$62.67	\$64.55	\$66.49	\$68.48
Configuration Management (CM) Specialist - Senior	\$62.28	\$64.15	\$66.07	\$68.06	\$70.10	\$72.20	\$74.37	\$76.60	\$78.89
Configuration Management (CM) Specialist - Intermediate	\$43.39	\$44.69	\$46.03	\$47.41	\$48.84	\$50.30	\$51.81	\$53.36	\$54.97
Configuration Management (CM) Specialist - Associate	\$34.21	\$35.24	\$36.29	\$37.38	\$38.50	\$39.66	\$40.85	\$42.07	\$43.34
Computer Operator - Senior	\$42.55	\$43.83	\$45.14	\$46.50	\$47.89	\$49.33	\$50.81	\$52.33	\$53.90
Computer Operator - Intermediate	\$36.46	\$37.55	\$38.68	\$39.84	\$41.04	\$42.27	\$43.54	\$44.84	\$46.19
Computer Operator - Associate	\$24.79	\$25.53	\$26.30	\$27.09	\$27.90	\$28.74	\$29.60	\$30.49	\$31.40
Distribution Operations Specialist - Senior	\$76.54	\$78.84	\$81.20	\$83.64	\$86.15	\$88.73	\$91.39	\$94.13	\$96.96
Distribution Operations Specialist - Intermediate	\$56.35	\$58.04	\$59.78	\$61.58	\$63.42	\$65.33	\$67.28	\$69.30	\$71.38
Distribution Operations Specialist - Associate	\$45.50	\$46.87	\$48.27	\$49.72	\$51.21	\$52.75	\$54.33	\$55.96	\$57.64
Information Assurance									
Information Assurance Engineer - Senior	\$128.23	\$132.08	\$136.04	\$140.12	\$144.32	\$148.65	\$153.11	\$157.71	\$162.44
Information Assurance Engineer - Intermediate	\$94.56	\$97.40	\$100.32	\$103.33	\$106.43	\$109.62	\$112.91	\$116.30	\$119.79
Information Assurance Engineer - Associate	\$57.58	\$59.31	\$61.09	\$62.92	\$64.81	\$66.75	\$68.75	\$70.82	\$72.94
Information Systems Auditor - Senior	\$68.17	\$70.22	\$72.32	\$74.49	\$76.73	\$79.03	\$81.40	\$83.84	\$86.36
Information Systems Auditor - Intermediate	\$58.28	\$60.03	\$61.83	\$63.68	\$65.59	\$67.56	\$69.59	\$71.68	\$73.83
Information Systems Auditor - Associate	\$41.84	\$43.10	\$44.39	\$45.72	\$47.09	\$48.50	\$49.96	\$51.46	\$53.00
Data Security Analyst - Senior	\$62.27	\$64.14	\$66.06	\$68.04	\$70.09	\$72.19	\$74.35	\$76.58	\$78.88
Data Security Analyst - Intermediate	\$45.06	\$46.41	\$47.80	\$49.24	\$50.72	\$52.24	\$53.80	\$55.42	\$57.08
Data Security Analyst - Associate	\$34.24	\$35.27	\$36.33	\$37.41	\$38.54	\$39.69	\$40.88	\$42.11	\$43.37
Disaster Recovery/COOP/Contingency Administrator	\$83.77	\$86.28	\$88.87	\$91.54	\$94.28	\$97.11	\$100.03	\$103.03	\$106.12
Information Security Specialist - Senior	\$81.09	\$83.52	\$86.03	\$88.61	\$91.27	\$94.01	\$96.83	\$99.73	\$102.72
Information Security Specialist - Intermediate	\$59.47	\$61.25	\$63.09	\$64.98	\$66.93	\$68.94	\$71.01	\$73.14	\$75.33
Information Security Specialist - Associate	\$45.05	\$46.40	\$47.79	\$49.23	\$50.70	\$52.23	\$53.79	\$55.41	\$57.07
IA Policy and Compliance Certified Professional - Senior	\$115.13	\$118.58	\$122.14	\$125.81	\$129.58	\$133.47	\$137.47	\$141.60	\$145.84
IA Policy and Compliance Certified Professional - Intermediate	\$100.10	\$103.10	\$106.20	\$109.38	\$112.66	\$116.04	\$119.52	\$123.11	\$126.80
IA Policy and Compliance Certified Professional - Associate	\$57.58	\$59.31	\$61.09	\$62.92	\$64.81	\$66.75	\$68.75	\$70.82	\$72.94
Cyber Operations Research Analyst - Senior	\$95.34	\$98.20	\$101.15	\$104.18	\$107.31	\$110.53	\$113.84	\$117.26	\$120.77
Cyber Operations Research Analyst - Intermediate	\$81.12	\$83.55	\$86.06	\$88.64	\$91.30	\$94.04	\$96.86	\$99.77	\$102.76
Cyber Operations Research Analyst - Associate	\$71.23	\$73.37	\$75.57	\$77.83	\$80.17	\$82.58	\$85.05	\$87.60	\$90.23
Cyber Operations Malware Analyst - Senior	\$95.34	\$98.20	\$101.15	\$104.18	\$107.31	\$110.53	\$113.84	\$117.26	\$120.77
Cyber Operations Malware Analyst - Intermediate	\$81.12	\$83.55	\$86.06	\$88.64	\$91.30	\$94.04	\$96.86	\$99.77	\$102.76
Cyber Operations Malware Analyst - Associate	\$71.23	\$73.37	\$75.57	\$77.83	\$80.17	\$82.58	\$85.05	\$87.60	\$90.23
Cyber Watch Operations Certified Analyst - Senior	\$115.13	\$118.58	\$122.14	\$125.81	\$129.58	\$133.47	\$137.47	\$141.60	\$145.84
Cyber Watch Operations Certified Analyst - Intermediate	\$100.10	\$103.10	\$106.20	\$109.38	\$112.66	\$116.04	\$119.52	\$123.11	\$126.80
Cyber Watch Operations Certified Analyst - Associate	\$57.58	\$59.31	\$61.09	\$62.92	\$64.81	\$66.75	\$68.75	\$70.82	\$72.94
System Administration									
Systems Administrator - Senior	\$101.42	\$104.46	\$107.60	\$110.82	\$114.15	\$117.57	\$121.10	\$124.73	\$128.48
Systems Administrator - Intermediate	\$87.04	\$89.65	\$92.34	\$95.11	\$97.96	\$100.90	\$103.93	\$107.05	\$110.26
Systems Administrator - Associate	\$57.58	\$59.31	\$61.09	\$62.92	\$64.81	\$66.75	\$68.75	\$70.82	\$72.94
Data Administration									
Database Administrator	\$89.13	\$91.80	\$94.56	\$97.39	\$100.28	\$103.23	\$106.23	\$109.28	\$112.39
Database Analyst/Programmer - Senior	\$72.22	\$74.39	\$76.62	\$78.92	\$81.28	\$83.72	\$86.23	\$88.82	\$91.49
Database Analyst/Programmer - Intermediate	\$54.11	\$55.73	\$57.41	\$59.13	\$60.90	\$62.73	\$64.61	\$66.55	\$68.54
Database Analyst/Programmer - Associate	\$36.16	\$37.24	\$38.36	\$39.51	\$40.70	\$41.92	\$43.18	\$44.47	\$45.81
Advanced Database Analyst/Programmer - Senior	\$125.13	\$128.88	\$132.75	\$136.73	\$140.83	\$145.06	\$149.41	\$153.89	\$158.51
Advanced Database Analyst/Programmer - Intermediate	\$100.10	\$103.10	\$106.20	\$109.38	\$112.66	\$116.04	\$119.52	\$123.11	\$126.80
Advanced Database Analyst/Programmer - Associate	\$66.02	\$68.00	\$70.04	\$72.14	\$74.31	\$76.54	\$78.83	\$81.20	\$83.63
Database Librarian	\$35.40	\$36.46	\$37.56	\$38.68	\$39.84	\$41.04	\$42.27	\$43.54	\$44.84

Labor Category	YR 1 - (9/25/18 - 9/24/19)	YR 2 - (9/25/19 - 9/24/20)	YR 3 - (9/25/20 - 9/24/21)	YR 4 - (9/25/21 - 9/24/22)	YR 5 - (9/25/22 - 9/24/23)	YR 6 - (9/25/23 - 9/24/24)	YR 7 - (9/25/24 - 9/24/25)	YR 8 - (9/25/25 - 9/24/26)	YR 9 - (9/25/26 - 9/24/27)
Data Warehousing									
Data Warehousing Project Manager	\$80.44	\$82.85	\$85.34	\$87.90	\$90.54	\$93.25	\$96.05	\$98.93	\$101.90
Data Architect	\$100.54	\$103.56	\$106.66	\$109.86	\$113.16	\$116.55	\$120.05	\$123.65	\$127.36
Data Warehouse Analyst	\$63.96	\$65.88	\$67.86	\$69.89	\$71.99	\$74.15	\$76.37	\$78.66	\$81.02
Data Warehousing Programmer	\$53.72	\$55.33	\$56.99	\$58.70	\$60.46	\$62.28	\$64.14	\$66.07	\$68.05
Data Warehousing Administrator	\$48.24	\$49.69	\$51.18	\$52.71	\$54.29	\$55.92	\$57.60	\$59.33	\$61.11
Help Desk/End User Support									
Help Desk Coordinator	\$78.23	\$80.58	\$82.99	\$85.48	\$88.05	\$90.69	\$93.41	\$96.21	\$99.10
Help Desk Support Service Specialist - Senior	\$56.23	\$57.92	\$59.65	\$61.44	\$63.29	\$65.19	\$67.14	\$69.16	\$71.23
Help Desk Support Service Specialist - Intermediate	\$48.23	\$49.68	\$51.17	\$52.70	\$54.28	\$55.91	\$57.59	\$59.32	\$61.10
Help Desk Support Service Specialist - Associate	\$44.34	\$45.67	\$47.04	\$48.45	\$49.91	\$51.40	\$52.94	\$54.53	\$56.17
PC Support Manager	\$62.79	\$64.67	\$66.61	\$68.61	\$70.67	\$72.79	\$74.97	\$77.22	\$79.54
PC Systems Specialist	\$43.39	\$44.69	\$46.03	\$47.41	\$48.84	\$50.30	\$51.81	\$53.36	\$54.97
PC Maintenance Technician	\$37.19	\$38.31	\$39.45	\$40.64	\$41.86	\$43.11	\$44.41	\$45.74	\$47.11
Internet/Web Operations									
Web Project Manager	\$86.37	\$88.96	\$91.63	\$94.38	\$97.21	\$100.13	\$103.13	\$106.22	\$109.41
Web Designer - Senior	\$72.33	\$74.50	\$76.73	\$79.04	\$81.41	\$83.85	\$86.37	\$88.96	\$91.63
Web Designer - Intermediate	\$55.31	\$56.97	\$58.68	\$60.44	\$62.25	\$64.12	\$66.04	\$68.02	\$70.07
Web Designer - Associate	\$43.39	\$44.69	\$46.03	\$47.41	\$48.84	\$50.30	\$51.81	\$53.36	\$54.97
Web software Developer - Senior	\$79.47	\$81.85	\$84.31	\$86.84	\$89.44	\$92.13	\$94.89	\$97.74	\$100.67
Web software Developer - Intermediate	\$65.36	\$67.32	\$69.34	\$71.42	\$73.56	\$75.77	\$78.04	\$80.38	\$82.80
Web software Developer - Associate	\$43.39	\$44.69	\$46.03	\$47.41	\$48.84	\$50.30	\$51.81	\$53.36	\$54.97
Web Technical Administrator	\$65.59	\$67.56	\$69.58	\$71.67	\$73.82	\$76.04	\$78.32	\$80.67	\$83.09
Web Content Administrator	\$43.39	\$44.69	\$46.03	\$47.41	\$48.84	\$50.30	\$51.81	\$53.36	\$54.97
Network Administration/Support									
Network Administrator - Senior	\$97.21	\$100.13	\$103.13	\$106.22	\$109.41	\$112.69	\$116.07	\$119.56	\$123.14
Network Administrator - Intermediate	\$73.12	\$75.31	\$77.57	\$79.90	\$82.30	\$84.77	\$87.31	\$89.93	\$92.63
Network Administrator - Associate	\$64.21	\$66.14	\$68.12	\$70.16	\$72.27	\$74.44	\$76.67	\$78.97	\$81.34
Network Support Technician - Senior	\$70.54	\$72.66	\$74.84	\$77.08	\$79.39	\$81.78	\$84.23	\$86.76	\$89.36
Network Support Technician - Intermediate	\$61.65	\$63.50	\$65.40	\$67.37	\$69.39	\$71.47	\$73.61	\$75.82	\$78.10
Network Support Technician - Associate	\$51.48	\$53.02	\$54.62	\$56.25	\$57.94	\$59.68	\$61.47	\$63.31	\$65.21
Documentation									
Documentation Specialist - Senior	\$60.22	\$62.03	\$63.89	\$65.80	\$67.78	\$69.81	\$71.91	\$74.06	\$76.28
Documentation Specialist - Intermediate	\$48.70	\$50.16	\$51.67	\$53.22	\$54.81	\$56.46	\$58.15	\$59.89	\$61.69
Documentation Specialist - Associate	\$30.68	\$31.60	\$32.55	\$33.52	\$34.53	\$35.57	\$36.63	\$37.73	\$38.86
Technical Editor	\$48.52	\$49.98	\$51.47	\$53.02	\$54.61	\$56.25	\$57.94	\$59.67	\$61.46
CAD Specialist	\$43.39	\$44.69	\$46.03	\$47.41	\$48.84	\$50.30	\$51.81	\$53.36	\$54.97
Graphics Specialist	\$55.27	\$56.93	\$58.64	\$60.40	\$62.21	\$64.07	\$66.00	\$67.98	\$70.01
Draftsman - Senior	\$81.66	\$84.11	\$86.63	\$89.23	\$91.91	\$94.67	\$97.51	\$100.43	\$103.44
Draftsman - Intermediate	\$74.35	\$76.58	\$78.88	\$81.24	\$83.68	\$86.19	\$88.78	\$91.44	\$94.18
Draftsman - Associate	\$51.59	\$53.14	\$54.73	\$56.37	\$58.06	\$59.81	\$61.60	\$63.45	\$65.35
Enterprise Resource Planning (ERP)/Business Process									
ERP Business Analyst - Senior	\$86.37	\$88.96	\$91.63	\$94.38	\$97.21	\$100.13	\$103.13	\$106.22	\$109.41
ERP Business Analyst - Intermediate	\$59.67	\$61.46	\$63.30	\$65.20	\$67.16	\$69.17	\$71.25	\$73.39	\$75.59
ERP Business Analyst - Associate	\$35.40	\$36.46	\$37.56	\$38.68	\$39.84	\$41.04	\$42.27	\$43.54	\$44.84
Business Systems Analyst - Senior	\$78.34	\$80.69	\$83.11	\$85.60	\$88.17	\$90.82	\$93.54	\$96.35	\$99.24
Business Systems Analyst - Intermediate	\$56.57	\$58.27	\$60.02	\$61.82	\$63.67	\$65.58	\$67.55	\$69.57	\$71.66
Business Systems Analyst - Associate	\$40.15	\$41.35	\$42.60	\$43.87	\$45.19	\$46.54	\$47.94	\$49.38	\$50.86

Labor Category	YR 1 - (9/25/18 - 9/24/19)	YR 2 - (9/25/19 - 9/24/20)	YR 3 - (9/25/20 - 9/24/21)	YR 4 - (9/25/21 - 9/24/22)	YR 5 - (9/25/22 - 9/24/23)	YR 6 - (9/25/23 - 9/24/24)	YR 7 - (9/25/24 - 9/24/25)	YR 8 - (9/25/25 - 9/24/26)	YR 9 - (9/25/26 - 9/24/27)
IS Training									
Information Systems Training Manager	\$79.47	\$81.85	\$84.31	\$86.84	\$89.44	\$92.13	\$94.89	\$97.74	\$100.67
Information Systems Training Specialist - Senior	\$72.23	\$74.40	\$76.63	\$78.93	\$81.30	\$83.73	\$86.25	\$88.83	\$91.50
Information Systems Training Specialist - Intermediate	\$61.25	\$63.09	\$64.98	\$66.93	\$68.94	\$71.01	\$73.14	\$75.33	\$77.59
Information Systems Training Specialist - Associate	\$50.14	\$51.64	\$53.19	\$54.79	\$56.43	\$58.13	\$59.87	\$61.67	\$63.52
Instructor Technical Training - Senior	\$94.88	\$97.73	\$100.66	\$103.68	\$106.79	\$109.99	\$113.29	\$116.69	\$120.19
Instructor Technical Training - Intermediate	\$81.89	\$84.35	\$86.88	\$89.48	\$92.17	\$94.93	\$97.78	\$100.71	\$103.74
Instructor Technical Training - Associate	\$66.54	\$68.54	\$70.59	\$72.71	\$74.89	\$77.14	\$79.45	\$81.84	\$84.29
Audio Visual									
Audio Visual Fabrication Engineer - Senior	\$76.22	\$78.51	\$80.86	\$83.29	\$85.79	\$88.36	\$91.01	\$93.74	\$96.55
Audio Visual Fabrication Engineer - Intermediate	\$65.23	\$67.19	\$69.20	\$71.28	\$73.42	\$75.62	\$77.89	\$80.22	\$82.63
Audio Visual Fabrication Engineer - Associate	\$52.12	\$53.68	\$55.29	\$56.95	\$58.66	\$60.42	\$62.23	\$64.10	\$66.02
Audio Visual Programmer - Senior	\$119.54	\$123.13	\$126.82	\$130.62	\$134.54	\$138.58	\$142.74	\$147.02	\$151.43
Audio Visual Programmer - Intermediate	\$97.56	\$100.49	\$103.50	\$106.61	\$109.80	\$113.10	\$116.49	\$119.99	\$123.59
Audio Visual Programmer - Associate	\$68.88	\$70.95	\$73.07	\$75.27	\$77.53	\$79.85	\$82.25	\$84.71	\$87.26
Artificial Intelligence (AI)									
Artificial Intelligence (AI) Engineer - Intermediate				\$146.50	\$150.90	\$155.42	\$160.08	\$164.89	\$169.83
Machine Learning Engineer - Intermediate				\$150.32	\$154.83	\$159.47	\$164.26	\$169.19	\$174.26
Machine Learning (Data) Scientist - Senior				\$216.26	\$222.75	\$229.43	\$236.31	\$243.40	\$250.70
Cloud Services									
Cloud Architect - Intermediate				\$147.62	\$152.05	\$156.61	\$161.31	\$166.15	\$171.13
Cloud Developer - Associate				\$99.59	\$102.58	\$105.66	\$108.82	\$112.09	\$115.45
Cloud DevOps Engineer - Intermediate				\$147.30	\$151.72	\$156.27	\$160.96	\$165.79	\$170.76
Cloud Engineer - Intermediate				\$138.85	\$143.02	\$147.31	\$151.73	\$156.28	\$160.97
Cloud Engineer - Senior				\$186.15	\$191.73	\$197.49	\$203.41	\$209.51	\$215.80
Cloud Network Engineer - Intermediate				\$140.07	\$144.27	\$148.60	\$153.06	\$157.65	\$162.38
Cloud Security Engineer - Intermediate				\$129.82	\$133.71	\$137.73	\$141.86	\$146.11	\$150.50
Platform Engineer - Intermediate				\$128.99	\$132.86	\$136.85	\$140.95	\$145.18	\$149.53
Test Engineer - Intermediate				\$122.69	\$126.37	\$130.16	\$134.07	\$138.09	\$142.23
User Interface, User Experience (UI/UX) Designer - Associate				\$108.20	\$111.45	\$114.79	\$118.23	\$121.78	\$125.43
Cybersecurity Services									
Cyber Security Architect - Intermediate				\$133.59	\$137.60	\$141.73	\$145.98	\$150.36	\$154.87
Data Services									
Data Architect - Senior				\$151.05	\$155.58	\$160.25	\$165.06	\$170.01	\$175.11
Data Engineer - Intermediate				\$140.33	\$144.54	\$148.88	\$153.34	\$157.94	\$162.68
Data Labeler - Intermediate				\$86.15	\$88.73	\$91.40	\$94.14	\$96.96	\$99.87
Data Scientist - Senior				\$210.77	\$217.09	\$223.61	\$230.31	\$237.22	\$244.34
Operations Research and Systems Analyst (ORSA) - Intermediate				\$119.09	\$122.66	\$126.34	\$130.13	\$134.04	\$138.06
Application Systems									
Continuous Integration, Continuous Delivery or Deployment (CI/CD)				\$142.31	\$146.58	\$150.98	\$155.51	\$160.17	\$164.98
DevOps Engineer - Intermediate				\$143.56	\$147.87	\$152.30	\$156.87	\$161.58	\$166.43
Full Stack Developer - Associate				\$120.73	\$124.35	\$128.08	\$131.92	\$135.88	\$139.96
DevSecOps Engineer - Intermediate				\$133.20	\$137.20	\$141.31	\$145.55	\$149.92	\$154.42
Information Technology Services									
Telecommunications Specialist - Senior				\$140.91	\$145.14	\$149.49	\$153.98	\$158.60	\$163.35
Telecommunications Specialist - Intermediate				\$123.59	\$127.30	\$131.12	\$135.05	\$139.10	\$143.27
Telecommunications Specialist - Associate				\$97.69	\$100.62	\$103.64	\$106.75	\$109.95	\$113.25

TekSynap ITES-3S Labor Categories and Rates (Contractor Site)

Labor Category	YR 1 - (9/25/18 - 9/24/19)	YR 2 - (9/25/19 - 9/24/20)	YR 3 - (9/25/20 - 9/24/21)	YR 4 - (9/25/21 - 9/24/22)	YR 5 - (9/25/22 - 9/24/23)	YR 6 - (9/25/23 - 9/24/24)	YR 7 - (9/25/24 - 9/24/25)	YR 8 - (9/25/25 - 9/24/26)	YR 9 - (9/25/26 - 9/24/27)
Program Management									
Program Manager - Senior	\$157.12	\$161.83	\$166.69	\$171.69	\$176.84	\$182.15	\$187.61	\$193.24	\$199.03
Program Manager - Intermediate	\$85.67	\$88.24	\$90.89	\$93.61	\$96.42	\$99.32	\$102.29	\$105.36	\$108.52
Program Manager - Associate	\$61.67	\$63.52	\$65.43	\$67.39	\$69.41	\$71.49	\$73.64	\$75.85	\$78.12
Project Management									
Project Manager - Senior	\$135.71	\$139.78	\$143.97	\$148.29	\$152.74	\$157.33	\$162.04	\$166.91	\$171.91
Project Manager - Intermediate	\$81.59	\$84.04	\$86.56	\$89.16	\$91.83	\$94.59	\$97.42	\$100.35	\$103.36
Project Manager - Associate	\$62.46	\$64.33	\$66.26	\$68.25	\$70.30	\$72.41	\$74.58	\$76.82	\$79.12
Enterprise Architect	\$108.45	\$111.70	\$115.05	\$118.51	\$122.06	\$125.72	\$129.49	\$133.38	\$137.38
Business Analyst -- Functional	\$89.76	\$92.45	\$95.23	\$98.08	\$101.03	\$104.06	\$107.18	\$110.39	\$113.71
Business Analyst -- Technical	\$57.60	\$59.33	\$61.11	\$62.94	\$64.83	\$66.77	\$68.78	\$70.84	\$72.97
Project Administrator	\$75.43	\$77.69	\$80.02	\$82.42	\$84.90	\$87.44	\$90.07	\$92.77	\$95.55
Project Administrator - Associate	\$36.77	\$37.87	\$39.01	\$40.18	\$41.38	\$42.63	\$43.91	\$45.22	\$46.58
Facility Staff Support - Senior	\$99.33	\$102.31	\$105.38	\$108.54	\$111.80	\$115.15	\$118.61	\$122.16	\$125.83
Facility Staff Support - Intermediate	\$87.30	\$89.92	\$92.62	\$95.40	\$98.26	\$101.20	\$104.24	\$107.37	\$110.59
Facility Staff Support - Associate	\$66.22	\$68.21	\$70.25	\$72.36	\$74.53	\$76.77	\$79.07	\$81.44	\$83.89
Quality Assurance									
Quality Assurance Manager- Senior	\$75.43	\$77.69	\$80.02	\$82.42	\$84.90	\$87.44	\$90.07	\$92.77	\$95.55
Quality Assurance Analyst - Intermediate	\$57.05	\$58.76	\$60.52	\$62.34	\$64.21	\$66.14	\$68.12	\$70.16	\$72.27
Quality Assurance Analyst - Associate	\$40.71	\$41.93	\$43.19	\$44.48	\$45.82	\$47.19	\$48.61	\$50.07	\$51.57
IT Systems Architecture									
Chief Enterprise Architect	\$228.78	\$235.64	\$242.71	\$249.99	\$257.49	\$265.22	\$273.18	\$281.37	\$289.81
Lead Enterprise Architect	\$170.63	\$175.75	\$181.02	\$186.45	\$192.05	\$197.81	\$203.74	\$209.85	\$216.15
Senior IT Systems Solution Architect	\$132.40	\$136.37	\$140.46	\$144.68	\$149.02	\$153.49	\$158.09	\$162.84	\$167.72
Client/Server Network Architect	\$109.31	\$112.59	\$115.97	\$119.45	\$123.03	\$126.72	\$130.52	\$134.44	\$138.47
Software Architect	\$143.93	\$148.25	\$152.70	\$157.28	\$161.99	\$166.85	\$171.86	\$177.02	\$182.33
Systems Engineer - Senior	\$104.77	\$107.91	\$111.15	\$114.49	\$117.92	\$121.46	\$125.10	\$128.85	\$132.72
Systems Engineer - Intermediate	\$81.59	\$84.04	\$86.56	\$89.16	\$91.83	\$94.59	\$97.42	\$100.35	\$103.36
Systems Engineer - Associate	\$61.18	\$63.02	\$64.91	\$66.85	\$68.86	\$70.92	\$73.05	\$75.24	\$77.50
Network Engineer - Senior	\$140.31	\$144.52	\$148.85	\$153.32	\$157.92	\$162.66	\$167.54	\$172.56	\$177.74
Network Engineer - Intermediate	\$121.74	\$125.39	\$129.15	\$133.03	\$137.02	\$141.13	\$145.36	\$149.72	\$154.22
Network Engineer - Associate	\$94.79	\$97.63	\$100.56	\$103.58	\$106.69	\$109.89	\$113.18	\$116.58	\$120.08
Managed System Engineer - Senior	\$99.54	\$102.53	\$105.60	\$108.77	\$112.03	\$115.39	\$118.86	\$122.42	\$126.09
Managed Systems Engineer - Intermediate	\$75.12	\$77.37	\$79.69	\$82.09	\$84.55	\$87.08	\$89.70	\$92.39	\$95.16
Managed Systems Engineer - Associate	\$66.56	\$68.56	\$70.61	\$72.73	\$74.91	\$77.16	\$79.48	\$81.86	\$84.32
Application Systems									
Applications Systems Analyst - Senior	\$83.18	\$85.68	\$88.25	\$90.89	\$93.62	\$96.43	\$99.32	\$102.30	\$105.37
Applications Systems Analyst - Intermediate	\$63.61	\$65.52	\$67.48	\$69.51	\$71.59	\$73.74	\$75.95	\$78.23	\$80.58
Applications Systems Analyst - Associate	\$42.77	\$44.05	\$45.37	\$46.74	\$48.14	\$49.58	\$51.07	\$52.60	\$54.18
Software Engineer - Senior	\$141.15	\$145.38	\$149.75	\$154.24	\$158.87	\$163.63	\$168.54	\$173.60	\$178.80
Software Engineer - Intermediate	\$117.45	\$120.97	\$124.60	\$128.34	\$132.19	\$136.16	\$140.24	\$144.45	\$148.78
Software Engineer - Associate	\$81.58	\$84.03	\$86.55	\$89.14	\$91.82	\$94.57	\$97.41	\$100.33	\$103.34
Applications Programmer - Senior	\$86.99	\$89.60	\$92.29	\$95.06	\$97.91	\$100.85	\$103.87	\$106.99	\$110.20
Applications Programmer - Intermediate	\$63.61	\$65.52	\$67.48	\$69.51	\$71.59	\$73.74	\$75.95	\$78.23	\$80.58
Applications Programmer - Associate	\$40.71	\$41.93	\$43.19	\$44.48	\$45.82	\$47.19	\$48.61	\$50.07	\$51.57
IT Certified Professional - Senior	\$98.01	\$100.95	\$103.98	\$107.10	\$110.31	\$113.62	\$117.03	\$120.54	\$124.16
IT Certified Professional - Intermediate	\$78.50	\$80.86	\$83.28	\$85.78	\$88.35	\$91.00	\$93.73	\$96.55	\$99.44
IT Certified Professional - Associate	\$56.42	\$58.11	\$59.86	\$61.65	\$63.50	\$65.41	\$67.37	\$69.39	\$71.47

Labor Category	YR 1 - (9/25/18 - 9/24/19)	YR 2 - (9/25/19 - 9/24/20)	YR 3 - (9/25/20 - 9/24/21)	YR 4 - (9/25/21 - 9/24/22)	YR 5 - (9/25/22 - 9/24/23)	YR 6 - (9/25/23 - 9/24/24)	YR 7 - (9/25/24 - 9/24/25)	YR 8 - (9/25/25 - 9/24/26)	YR 9 - (9/25/26 - 9/24/27)
Operations and Logistics									
Seat Management Administrator	\$62.17	\$64.04	\$65.96	\$67.93	\$69.97	\$72.07	\$74.23	\$76.46	\$78.76
Configuration Management (CM) Specialist - Senior	\$71.62	\$73.77	\$75.98	\$78.26	\$80.61	\$83.03	\$85.52	\$88.08	\$90.73
Configuration Management (CM) Specialist - Intermediate	\$49.90	\$51.40	\$52.94	\$54.53	\$56.16	\$57.85	\$59.58	\$61.37	\$63.21
Configuration Management (CM) Specialist - Associate	\$39.34	\$40.52	\$41.74	\$42.99	\$44.28	\$45.61	\$46.97	\$48.38	\$49.83
Computer Operator - Senior	\$48.93	\$50.40	\$51.91	\$53.47	\$55.07	\$56.72	\$58.42	\$60.18	\$61.98
Computer Operator - Intermediate	\$41.93	\$43.19	\$44.48	\$45.82	\$47.19	\$48.61	\$50.07	\$51.57	\$53.12
Computer Operator - Associate	\$28.51	\$29.37	\$30.25	\$31.15	\$32.09	\$33.05	\$34.04	\$35.06	\$36.12
Distribution Operations Specialist - Senior	\$88.02	\$90.66	\$93.38	\$96.18	\$99.07	\$102.04	\$105.10	\$108.25	\$111.50
Distribution Operations Specialist - Intermediate	\$64.80	\$66.74	\$68.75	\$70.81	\$72.93	\$75.12	\$77.37	\$79.70	\$82.09
Distribution Operations Specialist - Associate	\$52.33	\$53.90	\$55.52	\$57.18	\$58.90	\$60.66	\$62.48	\$64.36	\$66.29
Information Assurance									
Information Assurance Engineer - Senior	\$147.46	\$151.88	\$156.44	\$161.13	\$165.97	\$170.95	\$176.07	\$181.36	\$186.80
Information Assurance Engineer - Intermediate	\$108.74	\$112.00	\$115.36	\$118.82	\$122.39	\$126.06	\$129.84	\$133.74	\$137.75
Information Assurance Engineer - Associate	\$66.22	\$68.21	\$70.25	\$72.36	\$74.53	\$76.77	\$79.07	\$81.44	\$83.89
Information Systems Auditor - Senior	\$78.39	\$80.74	\$83.16	\$85.66	\$88.23	\$90.88	\$93.60	\$96.41	\$99.30
Information Systems Auditor - Intermediate	\$67.02	\$69.03	\$71.10	\$73.23	\$75.43	\$77.69	\$80.03	\$82.43	\$84.90
Information Systems Auditor - Associate	\$48.12	\$49.56	\$51.05	\$52.58	\$54.16	\$55.78	\$57.46	\$59.18	\$60.96
Data Security Analyst - Senior	\$71.60	\$73.75	\$75.96	\$78.24	\$80.59	\$83.00	\$85.49	\$88.06	\$90.70
Data Security Analyst - Intermediate	\$51.81	\$53.36	\$54.97	\$56.61	\$58.31	\$60.06	\$61.86	\$63.72	\$65.63
Data Security Analyst - Associate	\$39.38	\$40.56	\$41.78	\$43.03	\$44.32	\$45.65	\$47.02	\$48.43	\$49.89
Disaster Recovery/COOP/Contingency Administrator	\$96.34	\$99.23	\$102.21	\$105.27	\$108.43	\$111.68	\$115.03	\$118.49	\$122.04
Information Security Specialist - Senior	\$93.25	\$96.05	\$98.93	\$101.90	\$104.95	\$108.10	\$111.35	\$114.69	\$118.13
Information Security Specialist - Intermediate	\$68.39	\$70.44	\$72.55	\$74.73	\$76.97	\$79.28	\$81.66	\$84.11	\$86.63
Information Security Specialist - Associate	\$51.81	\$53.36	\$54.97	\$56.61	\$58.31	\$60.06	\$61.86	\$63.72	\$65.63
IA Policy and Compliance Certified Professional - Senior	\$132.40	\$136.37	\$140.46	\$144.68	\$149.02	\$153.49	\$158.09	\$162.84	\$167.72
IA Policy and Compliance Certified Professional - Intermediate	\$115.12	\$118.57	\$122.13	\$125.79	\$129.57	\$133.46	\$137.46	\$141.58	\$145.83
IA Policy and Compliance Certified Professional - Associate	\$66.22	\$68.21	\$70.25	\$72.36	\$74.53	\$76.77	\$79.07	\$81.44	\$83.89
Cyber Operations Research Analyst - Senior	\$109.64	\$112.93	\$116.32	\$119.81	\$123.40	\$127.10	\$130.92	\$134.84	\$138.89
Cyber Operations Research Analyst - Intermediate	\$93.29	\$96.09	\$98.97	\$101.94	\$105.00	\$108.15	\$111.39	\$114.73	\$118.18
Cyber Operations Research Analyst - Associate	\$81.91	\$84.37	\$86.90	\$89.51	\$92.19	\$94.96	\$97.80	\$100.74	\$103.76
Cyber Operations Malware Analyst - Senior	\$109.64	\$112.93	\$116.32	\$119.81	\$123.40	\$127.10	\$130.92	\$134.84	\$138.89
Cyber Operations Malware Analyst - Intermediate	\$93.29	\$96.09	\$98.97	\$101.94	\$105.00	\$108.15	\$111.39	\$114.73	\$118.18
Cyber Operations Malware Analyst - Associate	\$81.91	\$84.37	\$86.90	\$89.51	\$92.19	\$94.96	\$97.80	\$100.74	\$103.76
Cyber Watch Operations Certified Analyst - Senior	\$132.40	\$136.37	\$140.46	\$144.68	\$149.02	\$153.49	\$158.09	\$162.84	\$167.72
Cyber Watch Operations Certified Analyst - Intermediate	\$115.12	\$118.57	\$122.13	\$125.79	\$129.57	\$133.46	\$137.46	\$141.58	\$145.83
Cyber Watch Operations Certified Analyst - Associate	\$66.22	\$68.21	\$70.25	\$72.36	\$74.53	\$76.77	\$79.07	\$81.44	\$83.89
System Administration									
Systems Administrator - Senior	\$116.63	\$120.13	\$123.73	\$127.44	\$131.27	\$135.21	\$139.26	\$143.44	\$147.74
Systems Administrator - Intermediate	\$100.10	\$103.10	\$106.20	\$109.38	\$112.66	\$116.04	\$119.52	\$123.11	\$126.80
Systems Administrator - Associate	\$66.22	\$68.21	\$70.25	\$72.36	\$74.53	\$76.77	\$79.07	\$81.44	\$83.89
Data Administration									
Database Administrator	\$102.50	\$105.58	\$108.74	\$112.00	\$115.36	\$118.83	\$122.39	\$126.06	\$129.84
Database Analyst/Programmer - Senior	\$83.05	\$85.54	\$88.11	\$90.75	\$93.47	\$96.28	\$99.17	\$102.14	\$105.21
Database Analyst/Programmer - Intermediate	\$62.22	\$64.09	\$66.01	\$67.99	\$70.03	\$72.13	\$74.29	\$76.52	\$78.82
Database Analyst/Programmer - Associate	\$41.58	\$42.83	\$44.11	\$45.44	\$46.80	\$48.20	\$49.65	\$51.14	\$52.67
Advanced Database Analyst/Programmer - Senior	\$143.90	\$148.22	\$152.66	\$157.24	\$161.96	\$166.82	\$171.82	\$176.98	\$182.29
Advanced Database Analyst/Programmer - Intermediate	\$115.12	\$118.57	\$122.13	\$125.79	\$129.57	\$133.46	\$137.46	\$141.58	\$145.83
Advanced Database Analyst/Programmer - Associate	\$75.92	\$78.20	\$80.54	\$82.96	\$85.45	\$88.01	\$90.65	\$93.37	\$96.17
Database Librarian	\$40.71	\$41.93	\$43.19	\$44.48	\$45.82	\$47.19	\$48.61	\$50.07	\$51.57

Labor Category	YR 1 - (9/25/18 - 9/24/19)	YR 2 - (9/25/19 - 9/24/20)	YR 3 - (9/25/20 - 9/24/21)	YR 4 - (9/25/21 - 9/24/22)	YR 5 - (9/25/22 - 9/24/23)	YR 6 - (9/25/23 - 9/24/24)	YR 7 - (9/25/24 - 9/24/25)	YR 8 - (9/25/25 - 9/24/26)	YR 9 - (9/25/26 - 9/24/27)
Data Warehousing									
Data Warehousing Project Manager	\$92.51	\$95.29	\$98.14	\$101.09	\$104.12	\$107.24	\$110.46	\$113.78	\$117.19
Data Architect	\$115.62	\$119.09	\$122.66	\$126.34	\$130.13	\$134.04	\$138.06	\$142.20	\$146.46
Data Warehouse Analyst	\$73.55	\$75.76	\$78.03	\$80.37	\$82.78	\$85.26	\$87.82	\$90.46	\$93.17
Data Warehousing Programmer	\$61.78	\$63.63	\$65.54	\$67.51	\$69.53	\$71.62	\$73.77	\$75.98	\$78.26
Data Warehousing Administrator	\$55.48	\$57.14	\$58.86	\$60.62	\$62.44	\$64.32	\$66.25	\$68.23	\$70.28
Help Desk/End User Support									
Help Desk Coordinator	\$89.96	\$92.66	\$95.44	\$98.30	\$101.25	\$104.29	\$107.42	\$110.64	\$113.96
Help Desk Support Service Specialist - Senior	\$64.66	\$66.60	\$68.60	\$70.66	\$72.78	\$74.96	\$77.21	\$79.52	\$81.91
Help Desk Support Service Specialist - Intermediate	\$55.46	\$57.12	\$58.84	\$60.60	\$62.42	\$64.29	\$66.22	\$68.21	\$70.26
Help Desk Support Service Specialist - Associate	\$50.99	\$52.52	\$54.10	\$55.72	\$57.39	\$59.11	\$60.88	\$62.71	\$64.59
PC Support Manager	\$72.21	\$74.38	\$76.61	\$78.91	\$81.27	\$83.71	\$86.22	\$88.81	\$91.47
PC Systems Specialist	\$49.90	\$51.40	\$52.94	\$54.53	\$56.16	\$57.85	\$59.58	\$61.37	\$63.21
PC Maintenance Technician	\$42.77	\$44.05	\$45.37	\$46.74	\$48.14	\$49.58	\$51.07	\$52.60	\$54.18
Internet/Web Operations									
Web Project Manager	\$99.33	\$102.31	\$105.38	\$108.54	\$111.80	\$115.15	\$118.61	\$122.16	\$125.83
Web Designer - Senior	\$83.18	\$85.68	\$88.25	\$90.89	\$93.62	\$96.43	\$99.32	\$102.30	\$105.37
Web Designer - Intermediate	\$63.61	\$65.52	\$67.48	\$69.51	\$71.59	\$73.74	\$75.95	\$78.23	\$80.58
Web Designer - Associate	\$49.90	\$51.40	\$52.94	\$54.53	\$56.16	\$57.85	\$59.58	\$61.37	\$63.21
Web software Developer - Senior	\$91.39	\$94.13	\$96.96	\$99.86	\$102.86	\$105.95	\$109.12	\$112.40	\$115.77
Web software Developer - Intermediate	\$75.16	\$77.41	\$79.74	\$82.13	\$84.59	\$87.13	\$89.74	\$92.44	\$95.21
Web software Developer - Associate	\$49.90	\$51.40	\$52.94	\$54.53	\$56.16	\$57.85	\$59.58	\$61.37	\$63.21
Web Technical Administrator	\$75.43	\$77.69	\$80.02	\$82.42	\$84.90	\$87.44	\$90.07	\$92.77	\$95.55
Web Content Administrator	\$49.90	\$51.40	\$52.94	\$54.53	\$56.16	\$57.85	\$59.58	\$61.37	\$63.21
Network Administration/Support									
Network Administrator - Senior	\$111.79	\$115.14	\$118.60	\$122.16	\$125.82	\$129.60	\$133.48	\$137.49	\$141.61
Network Administrator - Intermediate	\$84.09	\$86.61	\$89.21	\$91.89	\$94.64	\$97.48	\$100.41	\$103.42	\$106.52
Network Administrator - Associate	\$73.84	\$76.06	\$78.34	\$80.69	\$83.11	\$85.60	\$88.17	\$90.81	\$93.54
Network Support Technician - Senior	\$81.12	\$83.55	\$86.06	\$88.64	\$91.30	\$94.04	\$96.86	\$99.77	\$102.76
Network Support Technician - Intermediate	\$70.90	\$73.03	\$75.22	\$77.47	\$79.80	\$82.19	\$84.66	\$87.20	\$89.81
Network Support Technician - Associate	\$59.20	\$60.98	\$62.81	\$64.69	\$66.63	\$68.63	\$70.69	\$72.81	\$74.99
Documentation									
Documentation Specialist - Senior	\$69.25	\$71.33	\$73.47	\$75.67	\$77.94	\$80.28	\$82.69	\$85.17	\$87.72
Documentation Specialist - Intermediate	\$56.01	\$57.69	\$59.42	\$61.20	\$63.04	\$64.93	\$66.88	\$68.89	\$70.95
Documentation Specialist - Associate	\$35.28	\$36.34	\$37.43	\$38.55	\$39.71	\$40.90	\$42.13	\$43.39	\$44.69
Technical Editor	\$55.80	\$57.47	\$59.20	\$60.97	\$62.80	\$64.69	\$66.63	\$68.63	\$70.69
CAD Specialist	\$49.90	\$51.40	\$52.94	\$54.53	\$56.16	\$57.85	\$59.58	\$61.37	\$63.21
Graphics Specialist	\$63.56	\$65.47	\$67.43	\$69.45	\$71.54	\$73.68	\$75.89	\$78.17	\$80.52
Draftsman - Senior	\$93.91	\$96.73	\$99.63	\$102.62	\$105.70	\$108.87	\$112.13	\$115.50	\$118.96
Draftsman - Intermediate	\$85.50	\$88.07	\$90.71	\$93.43	\$96.23	\$99.12	\$102.09	\$105.15	\$108.31
Draftsman - Associate	\$59.33	\$61.11	\$62.94	\$64.83	\$66.78	\$68.78	\$70.84	\$72.97	\$75.16
Enterprise Resource Planning (ERP)/Business Process Development									
ERP Business Analyst - Senior	\$99.33	\$102.31	\$105.38	\$108.54	\$111.80	\$115.15	\$118.61	\$122.16	\$125.83
ERP Business Analyst - Intermediate	\$68.62	\$70.68	\$72.80	\$74.98	\$77.23	\$79.55	\$81.94	\$84.39	\$86.93
ERP Business Analyst - Associate	\$40.71	\$41.93	\$43.19	\$44.48	\$45.82	\$47.19	\$48.61	\$50.07	\$51.57
Business Systems Analyst - Senior	\$90.09	\$92.79	\$95.58	\$98.44		\$104.44	\$107.57	\$110.80	\$114.12
Business Systems Analyst - Intermediate	\$65.05	\$67.00	\$69.01	\$71.08	\$73.21	\$75.41	\$77.67	\$80.00	\$82.40
Business Systems Analyst - Associate	\$46.17	\$47.56	\$48.98	\$50.45	\$51.96	\$53.52	\$55.13	\$56.78	\$58.49

Labor Category	YR 1 - (9/25/18 - 9/24/19)	YR 2 - (9/25/19 - 9/24/20)	YR 3 - (9/25/20 - 9/24/21)	YR 4 - (9/25/21 - 9/24/22)	YR 5 - (9/25/22 - 9/24/23)	YR 6 - (9/25/23 - 9/24/24)	YR 7 - (9/25/24 - 9/24/25)	YR 8 - (9/25/25 - 9/24/26)	YR 9 - (9/25/26 - 9/24/27)
IS Training									
Information Systems Training Manager	\$91.39	\$94.13	\$96.96	\$99.86	\$102.86	\$105.95	\$109.12	\$112.40	\$115.77
Information Systems Training Specialist - Senior	\$83.06	\$85.55	\$88.12	\$90.76	\$93.48	\$96.29	\$99.18	\$102.15	\$105.22
Information Systems Training Specialist - Intermediate	\$70.44	\$72.55	\$74.73	\$76.97	\$79.28	\$81.66	\$84.11	\$86.63	\$89.23
Information Systems Training Specialist - Associate	\$57.66	\$59.39	\$61.17	\$63.01	\$64.90	\$66.84	\$68.85	\$70.91	\$73.04
Instructor Technical Training - Senior	\$109.11	\$112.38	\$115.75	\$119.23	\$122.80	\$126.49	\$130.28	\$134.19	\$138.22
Instructor Technical Training - Intermediate	\$94.17	\$97.00	\$99.90	\$102.90	\$105.99	\$109.17	\$112.44	\$115.82	\$119.29
Instructor Technical Training - Associate	\$76.52	\$78.82	\$81.18	\$83.62	\$86.12	\$88.71	\$91.37	\$94.11	\$96.93
Audio Visual									
Audio Visual Fabrication Engineer - Senior	\$87.65	\$90.28	\$92.99	\$95.78	\$98.65	\$101.61	\$104.66	\$107.80	\$111.03
Audio Visual Fabrication Engineer - Intermediate	\$75.01	\$77.26	\$79.58	\$81.97	\$84.42	\$86.96	\$89.57	\$92.25	\$95.02
Audio Visual Fabrication Engineer - Associate	\$59.94	\$61.74	\$63.59	\$65.50	\$67.46	\$69.49	\$71.57	\$73.72	\$75.93
Audio Visual Programmer - Senior	\$137.47	\$141.59	\$145.84	\$150.22	\$154.72	\$159.37	\$164.15	\$169.07	\$174.14
Audio Visual Programmer - Intermediate	\$112.19	\$115.56	\$119.02	\$122.59	\$126.27	\$130.06	\$133.96	\$137.98	\$142.12
Audio Visual Programmer - Associate	\$79.21	\$81.59	\$84.03	\$86.55	\$89.15	\$91.83	\$94.58	\$97.42	\$100.34
Artificial Intelligence (AI)									
Artificial Intelligence (AI) Engineer - Intermediate				\$156.80	\$161.50	\$166.35	\$171.34	\$176.48	\$181.77
Machine Learning Engineer - Intermediate				\$160.89	\$165.72	\$170.69	\$175.81	\$181.08	\$186.52
Machine Learning (Data) Scientist - Senior				\$231.48	\$238.42	\$245.58	\$252.94	\$260.53	\$268.35
Cloud Services									
Cloud Architect - Intermediate				\$158.00	\$162.74	\$167.62	\$172.65	\$177.83	\$183.17
Cloud Developer - Associate				\$106.60	\$109.80	\$113.09	\$116.48	\$119.98	\$123.58
Cloud DevOps Engineer - Intermediate				\$157.66	\$162.39	\$167.26	\$172.28	\$177.45	\$182.77
Cloud Engineer - Intermediate				\$148.62	\$153.08	\$157.67	\$162.40	\$167.27	\$172.29
Cloud Engineer - Senior				\$199.25	\$205.23	\$211.38	\$217.73	\$224.26	\$230.99
Cloud Network Engineer - Intermediate				\$149.92	\$154.42	\$159.05	\$163.82	\$168.74	\$173.80
Cloud Security Engineer - Intermediate				\$138.95	\$143.12	\$147.41	\$151.83	\$156.39	\$161.08
Platform Engineer - Intermediate				\$138.07	\$142.21	\$146.48	\$150.87	\$155.40	\$160.06
Test Engineer - Intermediate				\$131.32	\$135.26	\$139.32	\$143.50	\$147.80	\$152.24
User Interface, User Experience (UI/UX) Designer - Associate				\$115.81	\$119.28	\$122.86	\$126.55	\$130.35	\$134.26
Cybersecurity Services									
Cyber Security Architect - Intermediate				\$142.99	\$147.28	\$151.70	\$156.25	\$160.94	\$165.76
Data Services									
Data Architect - Senior				\$161.68	\$166.53	\$171.53	\$176.67	\$181.97	\$187.43
Data Engineer - Intermediate				\$150.21	\$154.72	\$159.36	\$164.14	\$169.06	\$174.13
Data Labeler - Intermediate				\$92.22	\$94.99	\$97.84	\$100.77	\$103.79	\$106.91
Data Scientist - Senior				\$225.59	\$232.36	\$239.33	\$246.51	\$253.90	\$261.52
Operations Research and Systems Analyst (ORSA) - Intermediate				\$127.47	\$131.29	\$135.23	\$139.29	\$143.47	\$147.77
Application Systems									
Continuous Integration, Continuous Delivery or Deployment (CI/CD) Engineer -				\$152.32	\$156.89	\$161.60	\$166.44	\$171.44	\$176.58
DevOps Engineer - Intermediate				\$153.66	\$158.27	\$163.02	\$167.91	\$172.95	\$178.13
Full Stack Developer - Associate				\$129.22	\$133.10	\$137.09	\$141.20	\$145.44	\$149.80
DevSecOps Engineer - Intermediate				\$142.57	\$146.85	\$151.25	\$155.79	\$160.46	\$165.28
Information Technology Services									
Telecommunications Specialist - Senior				\$150.82	\$155.34	\$160.00	\$164.81	\$169.75	\$174.84
Telecommunications Specialist - Intermediate				\$132.28	\$136.25	\$140.34	\$144.55	\$148.88	\$153.35
Telecommunications Specialist - Associate				\$104.57	\$107.71	\$110.94	\$114.27	\$117.69	\$121.23

TekSynap ITES-3S T&M Rates

ODCs	YR 1 - (9/25/18 - 9/24/19)	YR 2 - (9/25/19 - 9/24/20)	YR 3 - (9/25/20 - 9/24/21)	YR 4 - (9/25/21 - 9/24/22)	YR 5 - (9/25/22 - 9/24/23)	YR 6 - (9/25/23 - 9/24/24)	YR 7 - (9/25/24 - 9/24/25)	YR 8 - (9/25/25 - 9/24/26)	YR 9 - (9/25/26 - 9/24/27)
ODC-Fixed Price	7.54%	7.54%	7.54%	7.54%	7.54%	7.54%	7.54%	7.54%	7.54%
CHESS Contract	3.25%	3.25%	3.25%	3.25%	3.25%	3.25%	3.25%	3.25%	3.25%
ESI Source	3.25%	3.25%	3.25%	3.25%	3.25%	3.25%	3.25%	3.25%	3.25%

Attachment 11 – TekSynap ITES-3S Labor Category Descriptions

The Government’s minimum requirements for each labor category are identified in the paragraphs below. The contractor may augment their labor categories and job descriptions on a task order basis; however, use of any labor categories not incorporated into the basic contract are subject to Government approval prior to use. The contractor may propose to the Government, at their discretion, additional labor categories and job descriptions within the scope of ITES-3S. Contractors may also propose deviations from the education and experience requirements for particular labor categories when responding to task order solicitations. These deviations shall be clearly identified in the task order proposal.

ITES-3S labor categories have been harmonized with the OMB’s Standard Occupational Classification (SOC) for which the BLS maintains compensation data. Labor categories are further defined as Associate, Intermediate, and Senior based on years of experience, education, and duties/responsibilities as follows:

- **SENIOR:** A Senior employee has over 10 years of experience and an MA/MS degree. A Senior employee typically works on high-visibility or mission critical aspects of a given program and performs all functional duties independently. A Senior employee may oversee the efforts of less senior staff and/or be responsible for the efforts of all staff assigned to a specific job.
- **INTERMEDIATE:** An Intermediate employee has more than 5 years of experience and a BA/BS or MA/MS degree. An Intermediate employee typically performs all functional duties independently.
- **ASSOCIATE:** An Associate employee has less than 5 years of experience and a BA/BS degree (or in certain technical roles, a BS). An Associate employee is responsible for assisting more senior positions and/or performing functional duties under the oversight of more senior positions.

SUBJECT MATTER EXPERT (SME)/FUNCTIONAL AREA EXPERT (FAE): An SME/FAE: is an individual whose qualifications and/or particular expertise are exceptional and/or highly unique. SMEs/FAEs do not have specific experience/education qualifications but are typically identified as recognized industry leaders for a given area of expertise. SMEs/FAEs typically perform the following kinds of functions: Initiates, supervises, and/or develops requirements from a project’s inception to conclusion for complex to extremely complex programs; Provides strategic advice, technical guidance, and expertise to program and project staff; Provides detailed analysis, evaluation, and recommendations for improvements, optimization development, and/or maintenance efforts for client-specific or mission critical challenges/issues; Consults with client to define need or problem supervises studies and leads surveys to collect and analyze data to provide advice and recommend solutions.

1. Program Management

SOC No. 11-3021, Computer, and Information Systems

SOC No. 11-1021, General and Operations

SOC No. 11-3011, Administrative Services

SOC No. 11-3131, Training and Development

1.1 Program Manager – Senior (Project Management Institute (PMI) certification required)

Description: Under indirect supervision, oversees the operational planning, establishment, execution, and evaluation of a multifaceted program/project typically consisting of a set of closely related subprograms or associated activities. Oversees fiscal, operational, administrative, and human resources management of the program; seeks and develops outside funding sources, serves as principal point of representation and liaison with external constituencies on operational matters, and provides day-to-day technical/professional guidance and leadership as appropriate to the area of expertise.

1.2 Program Manager – Intermediate (PMI certification desired)

Description: Under general direction, oversees the operational planning, establishment, execution, and evaluation of a multifaceted program/project typically consisting of a set of closely related subprograms or associated activities. Oversees fiscal, operational, administrative, and human resources management of the program; seeks and develops outside funding sources, serves as principal point of representation and liaison with external constituencies on operational matters, and provides day-to-day technical/professional guidance and leadership as appropriate to the area of expertise.

1.3 Program Manager – Associate

Description: Under immediate supervision, oversees the operational planning, establishment, execution, and evaluation of a multifaceted program/project typically consisting of a set of closely related subprograms or associated activities. Oversees fiscal, operational, administrative, and human resources management of the program; seeks and develops outside funding sources, serves as principal point of representation and liaison with external constituencies on operational matters, and provides day-to-day technical/professional guidance and leadership as appropriate to the area of expertise.

2. Project Management

SOC No. 11-3021, Computer, and Information Systems Manager

SOC No. 11-1021, General and Operations Manager

SOC No. 11-3011, Administrative Services, Facilities Manager,

SOC No. 11-3131, Training and Development Manager

SOC No. 17-2071, Electrical Engineer

SOC No. 17-2072, Electronics Engineer

SOC No. 17-2061, Computer Hardware Engineer

SOC No. 17-2199, Engineer, all others

SOC No. 15-1142, Computer Systems, Wide Area Network, Network, Network Security Administrator

SOC No. 15-1141, Database, Database Security Administrator

SOC No. 13-1071, Staffing Support

2.1 Project Manager – Senior (PMI certification required)

Description: 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.

2.2 Project Manager – Intermediate (PMI certification desired)

Description: Under general direction, 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.

2.3 Project Manager – Associate

Description: Under direct supervision, responsible for assigned aspects of the development and implementation of assigned projects and provides a single point of contact for those aspects. Interfaces with all areas affected by the project including end users, computer services, and client services. Ensures adherence to quality standards and reviews project deliverables. Manages the integration of vendor tasks and tracks and reviews vendor deliverables. Recommends action to direct the analysis and solutions of problems.

2.4 Enterprise Architect

Experience/Education: Minimum of 10 years of experience and MA/MS degree Description: Under general direction, has duties of instructing, directing, and checking the work of other project engineers. Responsible for developing strategies for technical IT infrastructures and the completion of assigned engineering projects within budgetary and scheduling guidelines. Leads a group of engineers, analysts, and/or technicians assigned for the duration of a project or may function as ongoing lead within a group of engineers associated with one or more technical areas within the telecom function (such as, but not limited to, network design, engineering, implementation, or operations/user support). Does not have formal supervisory responsibilities, although may provide input for (project) team member performance appraisals.

2.5 Business Analyst – Functional

Experience/Education: Minimum of 5 years of experience and BA/BS degree Description: Under general supervision, has duties of instructing, directing, and checking the work of other project engineers. Responsible for the completion of assigned engineering projects within budgetary and scheduling guidelines. Leads a group of engineers, analysts, and/or technicians assigned for the duration of a project or may function as ongoing lead within a group of engineers associated with one or more technical areas within the telecom function (such as, but not limited to, network design, engineering, implementation, or operations/user support). Does not have formal supervisory responsibilities, although may provide input for (project) team member performance appraisals.

2.6 Business Analyst – Technical

Experience/Education: Minimum less than 5 years of experience and BA/BS degree Description: Under direct supervision, has duties of instructing, directing, and checking the work of other project engineers. Reviews design documents and ensures technical specifications and designs are correct. Responsible for the completion of assigned engineering projects within budgetary and scheduling guidelines. Leads a group of engineers, analysts, and/or technicians assigned for the duration of a project or may function as ongoing lead within a group of engineers associated with one or more technical areas within the telecom function (such as, but not limited to, network design, engineering, implementation, or operations/user support). Does not have formal supervisory responsibilities, although may provide input for (project) team member performance appraisals.

2.7 Project Administrator

Experience/Education: Minimum of 5 years of experience and BA/BS degree Description: Under general direction, interpret and compose complex correspondences and presentations to include charts and diagrams directly supporting the DoD Enterprise infrastructure and infostructure IT goals and projects. Accountable for financial budgeting and tracking project KPI's and goals. Apply effective networking skills to carry out job responsibilities. Gather pertinent information from a variety of sources to perform duties. Resolve administrative issues/problems that arise and recommend process improvements. Ensure timely completion of multiple, simultaneous, independent events and projects of moderate complexity. Coordinate multiple work projects and other responsibilities (i.e. Training/status reporting, etc.). Some duties may be considered special assignments particular to either the department or manager. Prepare reports and correspondence from information gathered to support the entire effort. Interprets and applies standard policies and procedures to respond to complex inquiries, to resolve issues.

2.8 Project Administrator – Associate

Description: Under immediate supervision, interpret and compose complex correspondences and presentations to include charts and diagrams directly supporting the DoD Enterprise infrastructure and infostructure IT goals and projects. Apply effective networking skills to carry out job responsibilities. Gather pertinent information from a variety of sources to perform duties. Resolve administrative issues/problems that arise and recommend process improvements. Ensure timely completion of multiple, simultaneous, independent events and projects of moderate complexity. Coordinate multiple work projects and other responsibilities (i.e. Training/status reporting, etc.). Some duties may be considered special assignments particular to either the department or manager. Prepare reports and correspondence from information gathered to support the entire effort. Interprets and applies standard policies and procedures to respond to complex inquiries, to resolve issues.

2.9 Facility Staff Support – Senior

Description: Under indirect supervision, assists in developing & monitoring assigned department budget and risk management efforts directly supporting DoD Enterprise infrastructure and infostructure IT goals and projects. Can include tasks associated with receiving, distributing, or shipping of materials. Must possess strategic planning skills and have a thorough understanding of internal & external compliance policies. Accurately completes paperwork or system

transactions applicable to function, such as documentation of material movement (i.e., Receipt, Shop Order, and Packing Lists). Ability to organize, plan & schedule work with minimal supervision.

2.10 Facility Staff Support – Intermediate

Description: Under general direction, assists in developing & monitoring assigned department budget and risk management efforts directly supporting DoD Enterprise infrastructure and infostructure IT goals and projects. Can include tasks associated with receiving, distributing, or shipping of materials. Must possess strategic planning skills and have a thorough understanding of internal & external compliance policies. Accurately completes paperwork or system transactions applicable to function, such as documentation of material movement (i.e., Receipt, Shop Order, and Packing Lists). Ability to organize, plan & schedule work with minimal supervision.

2.11 Facility Staff Support – Associate

Description: Under immediate supervision, assists in developing & monitoring assigned department budget and risk management efforts directly supporting DoD Enterprise infrastructure and infostructure IT goals and projects. Can include tasks associated with receiving, distributing, or shipping of materials. Must possess strategic planning skills and have a thorough understanding of internal & external compliance policies. Accurately completes paperwork or system transactions applicable to function, such as documentation of material movement (i.e., Receipt, Shop Order, and Packing Lists). Ability to organize, plan & schedule work with minimal supervision.

3. Quality Assurance

SOC No. 17-2199, Engineer, all others
SOC No. 13-1111, Program, Management Analyst
SOC No. 15-2041, Statistical Analyst
SOC No. 15-1121, Information Systems Analyst
SOC No. 15-2031, Process, Operations Research Analyst

3.1 Quality Assurance Manager – Senior (Lean Six Sigma Black Belt Certification Required)

Description: Under general direction, carries out procedures to ensure that all information systems products and services meet organization standards and end-user requirements. Performs and leads tests of software to ensure proper operation and freedom from defects. May create test data for applications. Documents and works to resolve all complex problems. Reports progress on problem resolution to management. Devises improvements to current procedures and develops models of possible future configurations. Acts as information resource about assigned areas to technical writers and other Quality Assurance Analysts. Performs complex workflow analysis and recommends quality improvements.

3.2 Quality Assurance Analyst – Intermediate (Lean Six Sigma Green Belt Certification Required)

Description: Under general supervision, carries out procedures to ensure that all information systems products and services meet minimum organization standards and end-user requirements. Thoroughly tests software to ensure proper operation and freedom from defects. Documents and works to resolve all problems. Reports progress on problem resolution to management. Devises improvements to current procedures and develops models of possible future configurations. Performs workflow analysis and recommends quality improvements.

3.3 Quality Assurance Analyst – Associate

Description: Under direct supervision, carries out procedures to ensure that all information systems products and services meet organization standards and end-user requirements. Assists in the testing of software to ensure proper operation and freedom from defects. Documents and works to resolve basic problems. Reports progress on problem resolution to management. This position is staffed by beginners who have had sufficient educational background and/or experience to qualify them to start in quality assurance analysis.

3.4 Telecommunications Specialist – Senior

Description: Provides installation and operational support of voice and data communications hardware and software systems. Designs, develops, implements, tests, debugs, and maintains communications systems. Performs configuration of operating system and security patches for host and distributed systems, and implements incident response procedures during incidents of a network or host security breach. May provide leadership and direction to a team of specialists for these functions. Reviews customer requirements and makes recommendations for changes to existing technical architecture. Complies with prescribed customer, industry and agency standards.

3.5 Telecommunications Specialist – Intermediate

Description: Provides installation and operational support of voice and data communications hardware and software systems. Designs, develops, implements, tests, debugs, and maintains communications systems. Performs configuration of operating system and security patches for host and distributed systems, and implements incident response procedures during incidents of a network or host security breach. Complies with prescribed customer, industry and agency standards.

3.6 Telecommunications Specialist – Associate

Description: Assists in providing installation and operational support of voice and data communications hardware and software systems. Participates in design, development, implementation, test, debugging, and maintaining communications systems. Complies with prescribed customer, industry, and agency standards.

4. IT Systems Architecture

SOC No. 15-1121, Systems Architect

SOC No. 15-1143, Computer Network Architect

SOC No. 15-1133, Computer System Software Architect, Software Systems Developer, Embedded Systems Software Developer, Software Systems Engineer
SOC No. 15-1132, Software Applications Architect, Software Applications Developer, Software Applications Engineer
SOC No. 15-1130, Software Developers and Programmers
SOC No. 15-1131, System Programmers
SOC No. 17-2199, Engineer, all others

4.1 Chief Enterprise Architect

Experience/Education: Minimum of 10 years of experience and MA/MS degree Description: Leads and directs large teams with diverse functional and technical disciplines to include enterprise architects, systems engineers, business analysts, and network engineers. Works directly with senior executives of the enterprise to consult, coach, and advise on strategy, business alignment, enterprise architecture, IT solutions, and the associated impact on the organization and its stakeholders. Coordinates resolution of highly complex problems and tasks, selling new ideas and concepts in support of operational goals and objectives. Provides technical and analytical guidance to enterprise architecture team. Integrates and translates complex concepts into tactical action plans. Directs high-level enterprise architecture analysis, evaluation, design, integration, documentation, and development. Has a deep understanding of DoD business transformation and processes, DoD organizational structure, experience in developing briefings and responses to GAO, OMB, and executives within the department, and coordinated and developed Business Enterprise Architecture (BEA) Compliance Guidance criteria and various BEA evolution strategies. Possesses extensive knowledge of the DoDAF, the DoD Net-Centric and Data Strategies, the DoD Information Assurance Guidance, and the DoD Federation Strategy, and has had hands-on experience with the BEA and Enterprise Transition Plan, Service Oriented Architecture, and the Business Mission Area Federation Strategy and Roadmap.

4.2 Lead Enterprise Architect

Experience/Education: Minimum of 10 years of experience and a MA/MS degree Description: Responsible for all aspects of the development and maintenance of assigned enterprise architecture project and takes project from planning through final delivery. Interfaces with all areas affected by the project including end users, computer services, and client services. Defines project scope and objectives and develops detailed work plans, schedules, project estimates, resource plans, and status reports. Conducts project meetings and is responsible for project tracking and analysis. Leads a group of engineers, architects, and analysts and ensures adherence to quality standards and reviews enterprise architecture deliverables. Provides technical and analytical guidance to enterprise architecture team. Directs and participates in high-level enterprise architecture analysis, evaluation, design, integration, documentation, and development. Applies high-level business and technical principles and methods to very difficult technical problems to arrive at creative engineering solutions. Recommends and takes action to direct the analysis and solutions of problems. Has a deep understanding of DoD business transformation and processes, DoD organizational structure, and experience in developing briefings and responses to GAO, OMB, and executives within the department. Possesses extensive knowledge of and hands-on experience with the DoDAF, the Business Enterprise Architecture and Enterprise Transition Plan, Service Oriented Architecture, and the Business Mission Area Federation Strategy and Roadmap. Lead the development of the BEA and updates to the BEA Development Methodology and Architecture

Planning Guide. Familiar with the Core Business Mission and Business Enterprise Priority architecture liaisons.

4.3 Senior IT Systems Solution Architect

Experience/Education: Minimum of 10 years of experience and MA/MS degree Description: Participates in the design, creation, and maintenance of computerized databases. Responsible for the quality control and auditing of Telelogic System Architect (SA) databases to ensure accurate and appropriate use of data. Consults with and advises users on access, works directly with users to resolve data conflicts and inappropriate data usage, and directs the maintenance and use of the enterprise architecture encyclopedia. Consults with SA programming personnel to resolve system performance issues. Responsible for the installation, maintenance, configuration, and integrity of SA. Implements application enhancements that will improve the reliability and performance of the application. Works with network engineers to schedule installations and upgrades and maintains them in accordance with established IT policies and procedures. Responsible for file maintenance, control, and product support and facilitates change control, problem management, and communication among architects, engineers, and analysts. Establishes and enforces processes to ensure a consistent, well managed, and well-integrated application infrastructure. Develops appropriate application and process documentation. Expertise with the BEA SA repository and its internal structure, Visual Basic, SA macros, Windows NT server, SQL server, and DoDAF modeling methodology. Has a deep understanding of Business Transformation Agency (BTA) and enterprise architecture's role in it, the BTA organizational structure, and experience in coordinating delivery and publishing of the BEA.

4.4 Client/Server Network Architect

Experience/Education: Minimum of 10 years of experience and a MA/MS degree Description: Top-level technical expert responsible for design and development of a client/server environment. Develops strategy of client/server system and the design infrastructure necessary to support that strategy. Advises on selection of technological purchases with regards to processing, data storage, data access, and applications development. Sets standards for the client/server relational database structure for the organization (SQL, ORACLE, SYBASE, etc.). Advises of feasibility of potential future projects to management.

4.5 Software Architect

Experience/Education: Minimum of 10 years of experience and a MA/MS degree Description: Works independently designing and developing new software products or major enhancements to existing software. May lead a large development team in design of highly complex software systems. Acts as highest-level technical expert, addressing problems of systems integration, compatibility, and multiple platforms. Responsible for project completion. Performs feasibility analysis on potential future projects to management.

4.6 Systems Engineer – Senior

Description: Under general direction, performs high-level systems analysis, evaluation, design, integration, documentation, and implementation of very complex application that require a thorough knowledge of administrative and technical skills. Directs and participates in all phases of system development with emphasis on planning, analysis, evaluation, integration, testing and

acceptance phases (IV&V and DT&E). Applies higher-level business or technical principles and methods to very difficult technical problems to arrive at automated engineering solution. Designs and prepares technical reports and related documentation, and makes charts and graphs to record results. Prepare and deliver presentations and briefings as required by the Task Order. May be required to serve as Task Leader. Responsible for ensuring the quality and services delivered for particular task(s) for which this skill is performing the Task Leader position.

4.7 Systems Engineer – Intermediate

Description: Under general supervision, performs high-level systems analysis, evaluation, design, integration, documentation, and implementation of very complex application that require a thorough knowledge of administrative and technical skills. Directs and participates in all phases of system development with emphasis on planning, analysis, evaluation, integration, testing and acceptance phases (IV&V and DT&E). Applies higher-level business or technical principles and methods to very difficult technical problems to arrive at automated engineering solution.

4.8 Systems Engineer – Associate

Description: Under direct supervision assists in performing systems analysis, evaluation, design, integration, documentation, and implementation of applications that require comprehensive knowledge and technical skills.

4.9 Network Engineer – Senior

Description: Under general direction, installs, configures, and supports an organization's local area network (LAN), wide area network (WAN), Agency Internet Network (AIN), Intranet and Internet, and other data communications systems or a segment of a network system; maintains network hardware and software; monitors network to ensure network availability to all system users and perform necessary maintenance to support network availability; may supervise other network support and client server specialists and plan, coordinate, and implement network security measures; and will provide leadership/mentorship to junior & mid-level network engineers. Oversees network control center; provides support to projects that involve networks; performs a full range of complex network designs encompassing multiple technologies within a single network; evaluates new network technologies and makes recommendations to project managers regarding the integration of these technologies into the existing network; plans new configurations for integration into the network, using knowledge of the performance characteristics of the systems being added to the network and the specifications for network interfaces to insure effective integration and optimal network performance; ensures that adequate and appropriate planning is provided for hardware and communications facilities to develop and implement methodologies for analysis, installation and support of voice communications systems; and provides support in the translation of business requirements into telecommunications (*e.g.*, LAN, MAN, WAN, Voice, and Video) requirements, designs, and orders. The overarching INFOSEC and COMSEC security requirements for the Agency network add to the complexity of these positions.

4.10 Network Engineer – Intermediate

Description: Will complete tasks assigned by Senior Network Engineer. Under general supervision will install, configure, and support an organization's local area network (LAN), wide area network

(WAN), AIN, Intranet and Internet, and other data communications systems or a segment of a network system; maintain network hardware and software; monitors network to ensure network availability to all system users and perform necessary maintenance to support network availability; provides support to projects that involve networks; and provides support in the translation of business requirements into telecommunications (*e.g.*, LAN, MAN, WAN, Voice, and Video) requirements, designs, and orders.

4.11 Network Engineer – Associate

Description: Will complete tasks assigned by Senior Network Engineer. Under direct supervision will install, configure, and support an organization’s local area network (LAN), wide area network (WAN), AIN, Intranet and Internet, and other data communications systems or a segment of a network system; maintain network hardware and software; monitors network to ensure network availability to all system users and perform necessary maintenance to support network availability; provides support to projects that involve networks; and provides support in the translation of business requirements into telecommunications (*e.g.*, LAN, MAN, WAN, Voice, and Video) requirements, designs, and orders.

4.12 Managed System Engineer – Senior

Description: Under general direction, performs duties such as site surveys, architecture design, system evaluation, system analysis, and infrastructure assessment. The managed system engineer shall perform duties on tasks that require expertise in system/processor architecture, wired for management baseline, desktop management interface, SNMP, client/server architecture, operating systems, software applications, network protocols, routers, switches, remote access servers, and firewalls.

4.13 Managed Systems Engineer – Intermediate

Description: Under general supervision, performs duties such as site surveys, architecture design, system evaluation, system analysis, and infrastructure assessment. Performs duties on tasks that require expertise in system/processor architecture, wired for management baseline, desktop management interface, SNMP, client/server architecture, operating systems, software applications, network protocols, routers, switches, remote access servers, and firewalls.

4.14 Managed Systems Engineer – Associate

Description: Under direct supervision, assists in site surveys, architecture design, system evaluation, system analysis, and infrastructure assessment.

4.15 IT Functional Area Expert

Experience/Education: Minimum of 5 years of experience and BS degree Description: Recognized for strong expertise in industry issues and trends. Utilizes functional area expertise gained through direct industry experience to assess the operational and functional baseline of an organization and its organizational components. Works with senior managers and executives to provide industry vision and strategic direction with regard to their enterprise. Guides the determination of IT inadequacies and/or deficiencies that affect the functional area’s ability to support/meet organizational goals. Generates functional area strategies for enhanced IT operations in a cross-

functional area mode throughout the organization. Participates in account strategy sessions, strategic assessments, and design reviews to validate enterprise approach and associated work products. Provides guidance and direction to other professionals, acts in a consulting and/or advisory capacity; coordinates resolution of highly complex problems and tasks, and possesses ability to meet and operate under deadlines.

4.16 IT Subject Matter Expert

Experience/Education: Minimum of 5 years of experience and a BA/BS or MA/MS degree
Description: Executes tasks and projects relevant to subject matter. Reduces issues to practical recommended options. Explains recommendation to decision-makers in terms that permit decisions. Performs studies and analyses on subjects within the technical scope of work. Develops requirements from a project's inception to its conclusion for a particular IT subject matter area (i.e., simple to complex systems). Assists other project members with analysis and evaluation and with the preparation of recommendations for system improvements, optimization, development, and/or maintenance efforts in the following specialties: information systems architecture; networking; telecommunications; automation; communications protocols; risk management/electronic analysis; software; lifecycle management; software development methodologies; and modeling and simulation. Recognized at the industry level in a technical field or specialized engineering or technology area and is proficient in relevant engineering principles and practices. Applies experience, skills, and expert knowledge within an engineering discipline to complex assignments. Generates unique concepts as evidenced by synthesis of new products or processes. Creates or uses engineering/scientific tools to solve technical problems. Utilizes and develops tools, techniques, processes, and/or facilities such as state-of-the-art simulation environments, laboratories, and test facilities. Provides leadership for engineering activities in a specialized engineering or technology subject area. Serves as a major contributor to technical planning process and for providing technical management and guidance.

5. Application Systems

SOC No. 15-1130, Software Developers and Programmers

SOC No. 15-1131, System Programmers, Computer Language Coders

SOC No. 15-1132, Software Applications Developer, Software Applications Engineer

SOC No. 15-1133, Software Systems Developer, Embedded Systems Software Developer, Software Systems Engineer

SOC No. 15-1121, Information Systems Analyst

SOC No. 15-2031, Process, Procedure Analyst

SOC No. 17-2199, Engineer, all others

5.1 Applications Systems Analyst – Senior

Description: Under general direction, formulates/defines system scope and objectives based on user needs. Devises or modifies procedures to solve complex problems considering computer equipment capacity and limitations, operating time, and form of desired results. Prepares detailed specifications from which programs will be written. Analyzes and revises existing system logic difficulties and documentation, as necessary. Competent to work at the highest technical level of all phases of applications systems analysis activities. May use Computer-aided software engineering (CASE) tools.

5.2 Applications Systems Analyst – Intermediate

Description: Under general supervision, formulates and defines system scope and objectives through research and fact-finding to develop or modify moderately complex information systems. Prepares detailed specifications from which programs will be written. Analyzes and revises existing system logic difficulties and documentation, as necessary. Competent to work on most phases of applications systems analysis activities, but requires instruction and guidance in other phases. May use CASE tools.

5.3 Applications Systems Analyst – Associate

Description: Under immediate supervision, assists in research and fact-finding to develop or modify information systems. Assists in preparing detailed specifications from which programs will be written. Analyzes and revises existing system logic difficulties and documentation as necessary. May use CASE tools.

5.4 Software Engineer – Senior

Description: Under general direction, conducts or participates in multidisciplinary research and collaborates with equipment designers and/or hardware engineers in the planning, design, development, and utilization of electronic data processing systems software. Determines computer user needs; advises hardware designers on machine characteristics that affect software systems such as storage capacity, processing speed, and input/output requirements; designs and develops compilers and assemblers, utility programs, and operating systems.

5.5 Software Engineer – Intermediate

Description: Under general supervision, conducts or participates in multidisciplinary research and collaborates with equipment designers and/or hardware engineers in the planning, design, development, and utilization of electronic data processing systems software. Determines computer user needs; advises hardware designers on machine characteristics that affect software systems such as storage capacity, processing speed, and input/output requirements; designs and develops compilers and assemblers, utility programs, and operating systems.

5.6 Software Engineer – Associate

Description: Under direct supervision, assists in designing and developing compilers and assemblers, utility programs, and operating systems.

5.7 Applications Programmer – Senior

Description: Under general direction, devises or modifies procedures to solve complex problems considering computer equipment capacity and limitations, operating time, and form of desired results. Designs, codes, tests, debugs and documents those programs. Competent to work at the highest technical level of all phases of applications programming activities. Note: This position does not perform systems analysis functions.

5.8 Applications Programmer – Intermediate

Description: Under general supervision, modifies moderately complex applications programs from detailed specification. Codes, tests, debugs, and documents and maintains those programs. Competent to work on most phases of applications programming activities, but requires instruction and guidance in phases. Note: This position does not perform systems analysis functions.

5.9 Applications Programmer – Associate

Description: Under immediate supervision, modifies applications programs from detailed specifications. Codes, tests, debugs, documents, and maintains those programs. This level is staffed by beginners who have had sufficient educational background and/or experience to qualify them to start in applications programming. Note: This position does not perform systems analysis functions.

5.10 IT Certified Professional – Senior

Description: Under general direction, responsible for the most complex testing and analysis of all elements of the network facilities including: power, software, communications devices, lines, modems and terminals. Monitors and controls the performance and status of the network resources. May function in a lead capacity within the department. Provides guidance and direction for less experienced personnel.

5.11 IT Certified Professional – Intermediate

Description: Under general supervision, responsible for moderately complex tasks typically relating to network monitoring, operations, installation, or maintenance. Handles routine network activities and identifies and resolves routine network problems.

5.12 IT Certified Professional – Associate

Description: Under direct supervision, assists in monitoring and responding to technical control facility hardware and software problems utilizing hardware and software testing tools and techniques. May provide LAN server support. May assist installing terminals and associated hardware. Requires knowledge of data scopes, patch panels, modems, concentrators, and associated terminal and network management software.

5.13 DevOps Engineer – Intermediate

Description: A DevOps engineer introduces processes, tools, and methodologies to balance needs throughout the software development life cycle, from coding and deployment, to maintenance and updates.

5.14 DevSecOps Engineer – Intermediate

Description: DevSecOps is short for development, security, and operations. The DevSecOps Engineer automates the integration of security at every phase of the software development lifecycle, from initial design through integration, testing, deployment, and software delivery.

5.15 Full Stack Developer – Associate

Description: A full-stack developer is a programmer who works within software development and is knowledgeable in both the front end and back end of an application. They work to create a seamless user experience through their diverse skill set. They're also well-versed in databases, server configuration, user interface and more.

5.16 Continuous Integration, Continuous Delivery or Deployment (CI/CD) Engineer – Intermediate

Description: In software engineering, CI/CD or CICD generally refers to the combined practices of continuous integration and either continuous delivery or continuous deployment. CI/CD bridges the gaps between development and operation activities and teams by enforcing automation in building, testing and deployment of applications. Modern day DevOps practices involve continuous development, continuous testing, continuous integration, continuous deployment and continuous monitoring of software applications throughout its development life cycle. The main concepts attributed to CI/CD are continuous integration, continuous delivery, and continuous deployment. Responsible for improving and managing the productivity of technology processes by creating automated workflows to replace the manual ones.

6. Operations and Logistics

SOC No. 11-1071, Logistics Manager

SOC No. 11-3021, Computer, and Information Systems Manager

SOC No. 43-9011, Computer Operators

SOC No. 43-5071, Shipping, Receiving, and Expediting Clerks

SOC No. 43-5081, Stock Clerks and Order Fillers

SOC No. 13-1081, Logistician, Logistician Analyst, Logistics Planner, Logistics Specialist

6.1 Seat Management Administrator

Experience/Education: Minimum of 10 years of experience and MA/MS degree Description: The seat management administrator shall perform duties such as configuration management, infrastructure management, asset management, help desk, system analysis, and infrastructure assessment. The seat management administrator shall perform duties on tasks that require expertise in system/processor architecture, wired for management baseline, desktop management interface, SNMP, client/server architecture, operating systems, software applications, network protocols, routers, switches, remote access servers, and firewalls.

6.2 Configuration Management (CM) Specialist – Senior

Description: Under general direction, responsible for effectively tracking, logging, categorizing, and maintaining changes made against the accepted Army baseline(s) standards. Develops, distributes, and tracks all change packages resulting from approved Configuration Control Board action. Trains personnel by conducting workshops and seminars on the proper methodology to maintain a proactive CM program. Provides daily support and direction to staff as to change status requirements, deadlines, and problems.

6.3 Configuration Management (CM) Specialist – Intermediate

Description: Under immediate supervision, responsible for effectively tracking, logging, categorizing, and maintaining changes made against the accepted Army baseline(s) standards. Develops, distributes, and tracks all change packages resulting from approved Configuration Control Board action.

6.4 Configuration Management (CM) Specialist – Associate

Description: Under immediate supervision, distributes and tracks all change packages resulting from approved Configuration Control Board action. Provides daily support to staff as to change status requirements, deadlines, and problems.

6.5 Computer Operator – Senior

Description: Under general direction, monitors and controls one or more servers by operating the central console or on-line terminals. Studies program operating instruction sheets to determine equipment setup and run operations. Continuously observes the operation of the console panel, storage devices, and printers to monitor the system and determine the point of equipment or program failure. Manipulates controls in accordance with standard procedures to rearrange sequence of job steps to continue operations when individual units of the system malfunction. Confers with software systems engineering or applications programming personnel in the event errors require a change of instructions or sequence of operations. Maintains operating records such as machine performance and production reports. Competent to work at the highest level of all computer operations phases.

6.6 Computer Operator – Intermediate

Description: Under general supervision, monitors and controls a computer by operating the central console or on-line terminals. May operate auxiliary equipment directly associated with the computer. May maintain records regarding output units and supply inventories. May assist in manipulating controls to rearrange sequence of job steps to continue operations when individual units of the system malfunction. Competent to work on most phases of computer operations, but still may require some instruction and guidance for other phases.

6.7 Computer Operator – Associate

Description: Under immediate supervision, assists in performing routine tasks associated with operating a computer in accordance with detailed instructions.

6.8 Distribution Operations Specialist – Senior

Description: Under indirect supervision, responsible for review/develop/modify/test procedures and systems requirements to manage property book requirements directly supporting DoD Enterprise infrastructure and infostructure IT goals and projects. Train internal and external customers regarding procedures/processes and software applications. Conduct internal audits and development/review of corrective action plans. Negotiate supplier agreements and service contracts as required by job. Have knowledge of capital procurement processes. Perform duties and responsibilities as the lead on process improvement teams. Coordinate workflow and material movement to meet program and customer delivery requirements.

6.9 Distribution Operations Specialist – Intermediate

Description: Under general direction, responsible for review/develop/modify/test procedures and systems requirements to manage property book requirements directly supporting DoD Enterprise infrastructure and infostructure IT goals and projects. Train internal and external customers regarding procedures/processes and software applications. Conduct internal audits and development/review of corrective action plans. Negotiate supplier agreements and service contracts as required by job. Have knowledge of capital procurement processes. Perform duties and responsibilities as the lead on process improvement teams. Coordinate workflow and material movement to meet program and customer delivery requirements.

6.10 Distribution Operations Specialist – Associate

Description: Under immediate supervision, responsible for review/develop/modify/test procedures and systems requirements to manage property book requirements directly supporting DoD Enterprise infrastructure and infostructure IT goals and projects. Train internal and external customers regarding procedures/processes and software applications. Conduct internal audits and development/review of corrective action plans. Negotiate supplier agreements and service contracts as required by job. Have knowledge of capital procurement processes. Perform duties and responsibilities as the lead on process improvement teams. Coordinate workflow and material movement to meet program and customer delivery requirements.

7. Cybersecurity

SOC No. 15-1142, Network Security Administrator
SOC No. 15-1141, Database Security Administrator
SOC No. 11-3021, Computer, and Information Systems Manager
SOC No. 15-1122, Computer Security Specialist
SOC No. 15-1121, Computer Systems Analyst
SOC No. 15-1120, Computer, and Information Analyst
SOC No. 17-2061, Computer Hardware Engineer
SOC No. 15-1133, Software Systems Engineer
SOC No. 17-2199, Engineer, all others

7.1 Information Assurance Engineer – Senior

Description: Under general direction, responsible for all activities relating to information assurance procedures and systems. Develops information systems assurance programs and control guidelines. Confers with and advises subordinates on administrative policies and procedures and resolving technical problems, priorities, and methods. Consults with and advises other sections regarding internal controls and security procedures. Prepares activity and progress reports relating to the information systems audit function.

7.2 Information Assurance Engineer – Intermediate

Description: Under general supervision, develops information systems assurance programs and control guidelines, assists in resolving technical problems, priorities, and methods.

7.3 Information Assurance Engineer – Associate

Description: Under general supervision, audits new and existing information systems applications to ensure that appropriate controls exist, that processing is efficient and accurate, and that systems procedures are in compliance with corporate standards

7.4 Information Systems Auditor – Senior

Description: Under general direction, audits the most complex new and existing information systems applications to ensure that appropriate controls exist, that processing is efficient and accurate, and that information systems procedures are in compliance with corporate standards. Competent to work at the highest level of all phases of information systems auditing.

7.5 Information Systems Auditor – Intermediate

Description: Under general supervision, audits moderately complex new and existing information systems applications to ensure that appropriate controls exist, that processing is efficient and accurate, and that systems and procedures are in compliance with corporate standards. Competent to work on most phases of information systems auditing.

7.6 Information Systems Auditor – Associate

Description: Under direct supervision, carries out routine phases of the systems audit function. Assists in the auditing of new and existing information systems applications to ensure that appropriate controls exist, that processing is efficient and accurate, and that systems and procedures are in compliance with corporate standards. Staffed by skilled employees who have had sufficient educational background and/or experience in information systems auditing.

7.7 Data Security Analyst – Senior

Description: Under general direction, performs all procedures necessary to ensure the safety of information systems assets and to protect systems from intentional or inadvertent access or destruction. Interfaces with user community to understand their security needs and implements procedures to accommodate them. Ensures that user community understands and adheres to necessary procedures to maintain security. May require familiarity with domain structures, user authentication, and digital signatures. Conducts accurate evaluation of the level of security required. May require understanding of firewall theory and configuration. Must be able to weigh business needs against security concerns and articulate issues to management.

7.8 Data Security Analyst – Intermediate

Description: Under general supervision, performs all procedures necessary to ensure the safety of information systems assets and to protect systems from intentional or inadvertent access or destruction. Interfaces with user community to understand their security needs and implements procedures to accommodate them. Ensures that user community understands and adheres to necessary procedures to maintain security. May require familiarity with domain structures, user authentication, and digital signatures. Conducts accurate evaluation of the level of security

required. May require understanding of firewall theory and configuration. Frequently reports to a Senior Data Security Analyst.

7.9 Data Security Analyst – Associate

Description: Under direct supervision, performs all procedures necessary to ensure the safety of information, systems assets and to protect systems from intentional or inadvertent access or destruction. Interfaces with user community to understand their security needs and implements procedures to accommodate them. Ensures that user community understands and adheres to necessary procedures to maintain security. Conducts accurate evaluation of the level of security required. Provides management with status reports. Frequently reports to an Intermediate Data Security Analyst.

7.10 Disaster Recovery/COOP/Contingency Administrator

Experience/Education: Minimum of 10 years of experience and MS/PhD degree Description: Responsible for preparing contingency plans for system software, hardware, and applications for the organization. Implements procedures to ensure business applications continue to function through disruptive incidents within an organization. Develops and maintains various security controls to protect technology assets from internal or inadvertent modification, disclosure, or destruction. Provides reports to supervisors regarding effectiveness of data security and make recommendations for the adoption of new procedures. Oversees and facilitates the preparation of an organization-wide business resumption plan. Responsible for ensuring the business resumption plan adequately addresses the organization's requirements and established timeframes. Responsible for day-to-day security administration of the organization's data systems and data networks including systems access administration.

7.11 Information Security Specialist – Senior

Description: Under general direction, uses current information security technology disciplines and practices to ensure the confidentiality, integrity, and availability of corporate information assets in accordance with established standards and procedures. Develops and maintains knowledgebase on changing regulatory, threat, and technology landscapes to continually develop or maintain security policies and standards, and ensure compliance throughout the organization.

7.12 Information Security Specialist – Intermediate

Description: Under general supervision, uses current information security technology disciplines and practices to ensure the confidentiality, integrity, and availability of corporate information assets in accordance with established standards and procedures. Develops and maintains knowledgebase on changing regulatory, threat, and technology landscapes to continually develop or maintain security policies and standards, and ensure compliance throughout the organization.

7.13 Information Security Specialist – Associate

Description: Under direct supervision, assists in developing and maintaining knowledgebase on changing regulatory, threat, and technology landscapes to continually develop or maintain security policies and standards, and ensure compliance throughout the organization.

7.14 IA Policy and Compliance Certified Professional – Senior

Description: Under general direction, performs and leads support of Certification and Accreditation (C&A) or other IA/Computer Network Defense (CND) Compliance and Auditing processes and inspections for all enterprise systems and networks; ensures validity and accuracy review of all associated documentation. Leads and performs compliance reviews of computer security plans, performs risk assessments, and validates and performs security test evaluations and audits. Analyzes and defines security requirements for information protection for enterprise systems and networks. Assists in the development of security policies. Analyzes the sensitivity of information and performs vulnerability and risk assessments on the basis of defined sensitivity and information flow. Professionally certified as Technical Level III as defined by DODI 8570 is a requirement.

7.15 IA Policy and Compliance Certified Professional – Intermediate

Description: Under general supervision, performs C&A or other IA/CND Compliance and Auditing processes and inspections for all enterprise systems and networks; ensures validity and accuracy review of all associated documentation. Performs compliance reviews of computer security plans, performs risk assessments, and performs security test evaluations and audits. Analyzes security requirements for information protection for enterprise systems and networks. Assists in the development of security policies. Analyzes the sensitivity of information and performs vulnerability and risk assessments on the basis of defined sensitivity and information flow. Professionally certified as Technical Level II as defined by DODI 8570 is a requirement.

7.16 IA Policy and Compliance Certified Professional – Associate

Description: Under general supervision, assists in the support of Certification and Accreditation (C&A) or other IA/CND Compliance and Auditing processes and inspections for all enterprise systems and networks; assists in the development of all associated documentation. Assists in the compliance reviews of computer security plans, performs risk assessments, and assists in security test evaluations and audits. Analyzes security requirements for information protection for enterprise systems and networks. Professionally certified as Technical Level I as defined by DODI 8570 is a requirement.

7.17 Cyber Operations Research Analyst – Senior

Description: Under general direction, leads and participates in analysis of actual and predictable interacting operational activities of business to obtain a quantitative, rational basis for decision making through the application of logic and scientific or economic disciplines and techniques. Ability to devise modeling and measuring techniques; utilizes mathematics, statistical methods, engineering methods, operational mathematics techniques (linear programming, game theory, probability theory, symbolic language, etc.), and other principles and laws of scientific and economic disciplines. Ability to demonstrate a complete understanding and wide application of technical principles, theories, and concepts within the Cyber Research field and provide consultation to technical solutions over a wide range of complex difficult problems in which proposed solutions are imaginative, thorough, practicable, and consistent with organization

objectives. Professionally certified as Technical Level III as defined by DODI 8570 is a requirement.

7.18 Cyber Operations Research Analyst – Intermediate

Description: Under general supervision, participates in analysis of actual and predictable interacting operational activities of business to obtain a quantitative, rational basis for decision making through the application of logic and scientific or economic disciplines and techniques. Assists in devising models and measuring techniques; utilizes mathematics, statistical methods, engineering methods, operational mathematics techniques (linear programming, game theory, probability theory, symbolic language, etc.), and other principles and laws of scientific and economic disciplines. Ability to demonstrate a thorough understanding and ability to apply technical principles, theories, and concepts within the Cyber Research field and provide consultation to technical solutions over a wide range of complex difficult problems in which proposed solutions are imaginative, thorough, practicable, and consistent with organization objectives. Professionally certified as Technical Level II as defined by DODI 8570 is a requirement.

7.19 Cyber Operations Research Analyst – Associate

Description: Under general supervision, assists in analysis of actual and predictable interacting operational activities of business to obtain a quantitative, rational basis for decision making through the application of logic and scientific or economic disciplines and techniques. Assists with devising models and measuring techniques; utilizes mathematics, statistical methods, engineering methods, operational mathematics techniques (linear programming, game theory, probability theory, symbolic language, etc.), and other principles and laws of scientific and economic disciplines. Ability to demonstrate an understanding and ability to apply technical principles, theories, and concepts within the Cyber Research field and assists in providing consultation to technical solutions over a wide range of complex difficult problems in which proposed solutions are imaginative, thorough, practicable, and consistent with organization objectives. Professionally certified as Technical Level I as defined by DODI 8570 is a requirement.

7.20 Cyber Operations Malware Analyst – Senior

Description: Under general direction, leads and participates in the evaluation and analysis of complex malicious code through the utilization of tools, including disassemblers, debuggers, hex editors, un-packers, virtual machines, and network sniffers. Responsible for providing findings in a technical report with details of the malware, identification parameters, advanced capabilities, and mitigation strategies. Conducts research in the area of malicious software, vulnerabilities, and exploitation tactics. Requires experience with application security, network security, reverse engineering, or malware. Requires strong knowledge of worms, viruses, Trojans, rootkits, botnets, Windows internals, and the Win32 API. Extensive experience required in programming (assembly and web) and system analysis with various tools, including IDA Pro, Ollydbg, PCAP tools, or TCP Dump. Professionally certified, within a CND discipline, as Technical Level III as defined by DODI 8570 is a requirement.

7.21 Cyber Operations Malware Analyst – Intermediate

Description: Under general supervision, participates in the evaluation and analysis of complex malicious code through the utilization of tools, including disassemblers, debuggers, hex editors, unpackers, virtual machines, and network sniffers. Responsible for providing findings in a technical report with details of the malware, identification parameters, advanced capabilities, and mitigation strategies. Conducts research in the area of malicious software, vulnerabilities, and exploitation tactics. Requires experience with application security, network security, reverse engineering, or malware. Requires thorough knowledge of worms, viruses, Trojans, rootkits, botnets, Windows internals, and the Win32 API. Additional experience required in programming (assembly and web) and system analysis with various tools, including IDA Pro, Ollydbg, PCAP tools, or TCP Dump. Professionally certified, within a CND discipline, as Technical Level II as defined by DODI 8570 is a requirement.

7.22 Cyber Operations Malware Analyst – Associate

Description: Under general supervision, assists in the evaluation and analysis of complex malicious code through the utilization of tools, including disassemblers, debuggers, hex editors, unpackers, virtual machines, and network sniffers. Assists with providing findings in a technical report with details of the malware, identification parameters, advanced capabilities, and mitigation strategies. Provides research assistance in the area of malicious software, vulnerabilities, and exploitation tactics. Requires experience with application security, network security, reverse engineering, or malware. Requires knowledge of worms, viruses, Trojans, rootkits, botnets, Windows internals, and the Win32 API. Additional experience required in programming (assembly and web) and system analysis with various tools, including IDA Pro, Ollydbg, PCAP tools, or TCP Dump. Professionally certified, within a CND discipline, as Technical Level I as defined by DODI 8570 is a requirement.

7.23 Cyber Watch Operations Certified Analyst – Senior

Description: Under general direction, leads security event monitoring and correlation within a tiered Security Operations Center. Proven experience and ability to leverage CND analyst toolsets to detect and respond to IT security incidents. Ability to implement standard procedures for incident response interfacing with Information Security Officer and IT staff. Conducts research and document threats and their behavior to include monitoring external CSIRTs/CERTs. Provide recommendations to threat mitigation strategies. Employ effective web, email, and telephonic communications to clearly manage security incident response procedures. Perform routine event reporting over time including trend reporting and analysis. Experience required in security or network technology (Unix/Windows OS, Cisco/Juniper Routing-Switching) within a hands-on design/Implementation/Administration role. Demonstrates in-depth knowledge of TCP-IP protocol implementations for all common network services in addition to demonstrated capability to perform network packet analysis and anomaly detection. Professionally certified, within a CND discipline, as Technical Level III as defined by DODI 8570 is a requirement.

7.24 Cyber Watch Operations Certified Analyst – Intermediate

Description: Under general supervision, participates in security event monitoring and correlation within a tiered Security Operations Center. Proven experience and ability to leverage CND analyst

toolsets to detect and respond to IT security incidents. Conducts research and document threats and their behavior to include monitoring external CSIRTs/CERTs. Assist in providing recommendations to threat mitigation strategies. Employ effective web, email, and telephonic communications to clearly manage security incident response procedures. Perform routine event reporting over time including trend reporting and analysis. Experience required in security or network technology (Unix/Windows OS, Cisco/Juniper Routing-switching) within a hands-on Implementation or Administration role. Demonstrates thorough knowledge of TCP-IP protocol implementation for all common network services in addition to demonstrated capability to perform network packet analysis and anomaly detection. Professionally certified, within a CND discipline, as Technical Level II as defined by DODI 8570 is a requirement. **7.25 Cyber Watch Operations Certified Analyst – Associate Description:**

Under general supervision, assists with security event monitoring, correlation, and daily event reporting within a tiered Security Operations Center. Experience with CND analyst toolsets to detect and respond to IT security incidents. Employ effective web, email, and telephonic communications to clearly manage security incident response procedures. Experience required in security or network technology (Unix/Windows OS, Cisco/Juniper RoutingSwitching) within a hands-on Administration role. Demonstrates knowledge of TCP-IP protocol implementations for all common network services in addition to demonstrated capability to perform network packet analysis and anomaly detection. Professionally certified, within a CND discipline, as Technical Level I as defined by DODI 8570 is a requirement.

7.26 Cyber Security Architect (Alternate job titles: Cyber Security Systems Designer, IT Security Architect) - Intermediate

Description: Cyber Security Architects are responsible for the overall maintenance of an organization's IT security systems and protocols. They design and implement security measures for hardware, software, and network platforms to ensure protection from cyber-attacks and any other possible harmful intrusions that could compromise or damage an organization's data and network infrastructure. These architects assess existing cybersecurity systems and protocols and design and implement upgrades to existing measures as well as implementing new procedures.

8. System Administration

SOC No. 15-1142, Network Administrator

SOC No. 15-1141, Database Administrator

SOC No. 11-3021, Computer, and Information Systems Manager

8.1 Systems Administrator – Senior

Description: Under general direction, responsible for activities related to system administration. Assigns personnel to various projects, directs their activities, and evaluates their work. Ensures long-term requirements of systems operations and administration are included in the overall information systems planning of the organization. Responsible for the installation, maintenance, configuration, and integrity of computer software. Implements operating system enhancements that will improve the reliability and performance of the system.

8.2 Systems Administrator – Intermediate

Description: Under general supervision, responsible for installing, configuring, and maintaining operating system workstations and servers, including web servers, in support of business processing requirements. Performs software installations and upgrades to operating systems and

layered software packages. Schedules installations and upgrades and maintains them in accordance with established IT policies and procedures. Monitors and tunes the system to achieve optimum performance levels. Ensures workstation/server data integrity by evaluating, implementing, and managing appropriate software and hardware solutions. Ensures data/media recoverability by implementing a schedule of system backups and database archive operations. Supports media management through internal methods and procedures or through offsite storage and retrieval services. Develops and promotes standard operating procedures. Conducts routine hardware and software audits of workstations and servers to ensure compliance with established standards, policies, and configuration guidelines. Develops and maintains a comprehensive operating system hardware and software configuration database/library of all supporting documentation.

8.3 Systems Administrator – Associate

Description: Under direct supervision, maintains integrity of the operating system environment. Performs system software upgrades including planning and scheduling, testing, and coordination. Performs workstation and server administration setup. Coordinates disk space planning and management. Maintains growth statistics, space forecasts, tape libraries, and software and hardware inventories. Performs data backups and recoveries. Monitors and maintains continuity with system software licensing and maintenance agreements. Provides recommendations regarding hardware and system software planning and budgeting. Maintains production change control schedule and participates in change control.

9. Data Administration

SOC No. 15-1141, Database Administrator, Database Management System Specialist, Database Security Administrator

SOC No. 15-1132, Database Developer

SOC No. 11-3021, Computer, and Information Systems Manager

9.1 Database Administrator

Experience/Education: Minimum of 10 years of experience and MS/PhD degree Description: Participates in the design, creation, and maintenance of computerized databases. Responsible for the quality control and auditing of databases to ensure accurate and appropriate use of data. Works with management to develop database strategies to support organization requirements. Consults with and advises users on access to various databases. Works directly with users to resolve data conflicts and inappropriate data usage. Directs the maintenance and use of the corporate data dictionary.

9.2 Database Analyst/Programmer – Senior

Description: Under general direction, designs, implements and maintains complex databases with respect to JCL, access methods, access time, device allocation, validation checks, organization, protection and security, documentation, and statistical methods. Includes maintenance of database dictionaries, overall monitoring of standards and procedures, and integration of systems through database design. Competent to work at the highest level of all phases of database management.

9.3 Database Analyst/Programmer – Intermediate

Description: Under general supervision, designs, implements, and maintains moderately complex databases. Includes maintenance of database dictionaries and integration of systems through

database design. Competent to work on most phases of database administration, but may require some instruction and guidance in other phases.

9.4 Database Analyst/Programmer – Associate

Description: Under direct supervision, assists in the implementation and maintenance of databases.

9.5 Advanced Database Analyst/Programmer – Senior

Description: Under general direction, leads and participates in the development and maintenance of Cyber and IA database systems while also offering database development resource to the development team. Required to review and provide technical solutions to projects which may be in different stages of the development life cycle. Requires knowledge and experience with Oracle or MS SQL Server DBMS, SQL Language, Unix/Linux including basic shell commands, data warehousing, report generation, job scheduling and monitoring tools, XML, HTML, open source development, and technical documenting skills (Windows Office/Visio/Cvs, etc.). Advanced Oracle or Microsoft SQL Server certification is required. Professionally certified as Technical Level III as defined by DODI 8570 is a requirement.

9.6 Advanced Database Analyst/Programmer – Intermediate

Description: Under general supervision, participates in the development and maintenance of Cyber and IA database systems while also offering database development resource to the development team. Required to review and provide technical solutions to projects which may be in different stages of the development life cycle. Requires knowledge and experience with Oracle or MS SQL Server DBMS, SQL Language, Unix/Linux including basic shell commands, data warehousing, report generation, job scheduling and monitoring tools, XML, HTML, open source development, and technical documenting skills (Windows Office/Visio/Cvs, etc.). Oracle or Microsoft SQL Server certification is required. Professionally certified as Technical Level II as defined by DODI 8570 is a requirement.

9.7 Advanced Database Analyst/Programmer – Associate

Description: Under general supervision, assists in the development and maintenance of Cyber and IA database systems while also offering database development resource to the development team. Assists with reviews and provides technical solutions to projects which may be in different stages of the development life cycle. Requires knowledge and experience with Oracle or MS SQL Server DBMS, SQL Language, Unix/Linux including basic shell commands, data warehousing, report generation, job scheduling and monitoring tools, XML, HTML, open source development, and technical documenting skills (Windows Office/Visio/Cvs, etc.). Oracle or Microsoft SQL Server certification is required. Professionally certified as Technical Level I as defined by DODI 8570 is a requirement.

9.8 Database Librarian

Experience/Education: Minimum less than 5 years of experience and BS degree Description: Under general supervision, enters and maintains data dictionary information, data keyword lists, and dictionary forms. Reviews all information to be entered into the dictionary to assure adherence

to standards and to ensure that all requirements are met. Maintains current library of each processing system's information recorded in the dictionary.

10. Data Warehousing

SOC No. 15-1141, Database Administrator, Database Management System Specialist, Database Security Administrator

SOC No. 15-1132, Database Developer

SOC No. 11-3021, Computer, and Information Systems Manager

SOC No. 43-4171, Information Clerk

SOC No. 43-2021, Information Operator

10.1 Data Warehousing Project Manager

Experience/Education: Minimum of 10 years of experience and MA/MS degree Description: Works in a data warehouse environment that includes data design, database architecture, metadata, and repository creation. Responsible for leading data warehouse team in development and enhancements of the data warehouse user interface. Establishes user requirements. Creates new standards and procedures related to end user and internal interface development. Works with Data Architect on technical issues and system architecture definition. Translates high-level work plans and converts to detailed assignments for team members. Monitors status of assignments and reviews work for completion/quality.

10.2 Data Architect

Experience/Education: Minimum of 10 years of experience and MA/MS degree Description: Works in a data warehouse environment that includes data design, database architecture, metadata, and repository creation. Translates business needs into long-term architecture solutions. Defines, designs, and builds dimensional databases. Responsible for developing data warehousing blueprints, evaluating hardware and software platforms, and integrating systems. Evaluates reusability of current data for additional analyses. Conducts data cleaning to rid the system of old, unused, or duplicate data. Reviews object and data models and the metadata repository to structure the data for better management and quicker access.

10.3 Data Warehouse Analyst

Experience/Education: Minimum of 5 years of experience and BA/BS degree Description: Works in a data warehouse environment that includes data design, database architecture, metadata, and repository creation. Reviews data loaded into the data warehouse for accuracy. Responsible for the development, maintenance and support of an enterprise data warehouse system and corresponding data marts. Troubleshoots and tunes existing data warehouse applications. Conducts research into new data warehouse applications and determines viability for adoption. Assists in establishing development standards. Evaluates existing subject areas stored in the data warehouse. Incorporated existing subject areas into an enterprise model. Creates new or enhanced components of the data warehouse.

10.4 Data Warehousing Programmer

Experience/Education: Minimum of 5 years of experience and BA/BS degree Description: Under general supervision, responsible for product support and maintenance of the data warehouse. Performs data warehouse design and construction. Codes and documents scripts and stored procedures. Designs and implements data strategy methods. Develops appropriate programs and systems documentation. Assists with metadata repository management. Prepares and implements data verification and testing methods for the data warehouse. Creates index and view scripts.

10.5 Data Warehousing Administrator

Experience/Education: Minimum of 10 years of experience and MA/MS degree Description: Under general supervision, coordinates the data administration technical function for both data warehouse development and maintenance. Plans and oversees the technical transitions between development, testing, and production phases of the workplace. Facilitates change control, problem management, and communication among data architects, programmers, analysts, and engineers. Establishes and enforces processes to ensure a consistent, well managed, and well-integrated data warehouse infrastructure. Expands and improves data warehouse to include data from all functions of the organization using data manipulation, transformation, and cleansing tools.

11. Help Desk/End User Support

SOC No. 11-3021, Computer, and Information Systems Manager

SOC No. 15-1142, Computer Systems Administrator

SOC No. 15-1121, Computer Systems Analyst

SOC No. 15-1120, Computer, and Information Analyst

SOC No. 15-1151, Help Desk Technician

SOC No. 15-1152, Computer User Support Specialist, Computer Network Support Specialist

11.1 Help Desk Coordinator

Experience/Education: Minimum of 10 years of experience and MA/MS degree Description: Responsible for ensuring the timely process through which problems are controlled, including problem recognition, research, isolation, resolution, and follow-up steps. Requires experience and understanding of MIS environment. Is able to resolve less complex problems immediately, while more complex problems are assigned to second level support or supervisor. Typically involves use of problem management database and help desk system. May provide guidance/training for less experienced personnel.

11.2 Help Desk Support Service Specialist – Senior

Description: Under general direction, provides second-tier support to end-users for PC, server, mainframe applications, and hardware. Handles problems that the first-tier of help desk support is unable to resolve. May interact with network services, software systems engineering, and/or applications development to restore service and/or identify and correct core problem. Simulates or recreates user problems to resolve operating difficulties. Recommends systems modifications to reduce user problems. Maintains currency and highest level of technical skill in field of expertise.

11.3 Help Desk Support Service Specialist – Intermediate

Description: Under general supervision, provides second-tier support to end-users for PC, server, mainframe applications and hardware. Handles problems that the first-tier of help desk support is unable to resolve. May interact with network services, software systems engineering, and/or applications development to restore service and/or identify and correct core problem. Simulates or recreates user problems to resolve operating difficulties. Recommends systems modifications to reduce user problems. Maintains currency and high level of technical skill in field of expertise. Escalates more complex problems to Senior level.

11.4 Help Desk Support Service Specialist – Associate

Description: 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 Intermediate and/or Senior level.

11.5 PC Support Manager

Experience/Education: Minimum of 10 years of experience and MA/MS degree Description: Responsible for overall personal computer activity. Establishes and implements PC policies, procedures, and standards, and ensures their conformance with information systems goals and procedures. Studies and projects PC resource requirements including personnel, software, equipment, and facilities, and makes recommendations to management. Maintains currency in new developments and technology. Provides for the training of department staff and end users. Directs setup and maintenance of library and materials for end user reference and reviews department staff. Ensures that security procedures are implemented and enforced. Provides leadership in the effective use of internal data processing, automated office systems and data communications. May also manage LAN services.

11.6 PC Systems Specialist

Experience/Education: Minimum of 5 years of experience and BA/BS degree Description: Under general supervision, performs analytical, technical, and administrative work in the planning, design, and installation of new and existing personal computer systems. Works on moderately complex applications. Confers with end users to determine types of hardware and software required. Writes programs to fulfill requirements or selects appropriate off-the-shelf software and modifies to suit. May maintain or utilize telecommunications protocols. Installs new hardware and maintains existing hardware. Trains end users in use of equipment and software.

11.7 PC Maintenance Technician

Experience/Education: Minimum less than 5 years of experience and BS degree Description: Under direct supervision, performs general maintenance tasks, troubleshoots, and repairs computer systems and peripheral equipment located throughout the organization. Maintains an adequate spare parts inventory of systems, subsystems, and component parts used in repair work. Prepares

progress reports for all work performed. Receives work direction from supervisor on work priorities and daily assignments. Frequently reports to a PC Support Manager.

12. Internet/Web Operations

SOC No. 11-3021, Computer, and Information Systems Manager

SOC No. 15-1143, Web Designer, Web Developer

SOC No. 15-1134, Internet Developer

SOC No. 15-1122, Internet Security Specialist

12.1 Web Project Manager

Experience/Education: Minimum of 10 years of experience and MS/PhD degree Description: Responsible for web strategy and operations. Develops business plan and annual budget for website function. Accountable for budget, staff planning, management, and products and service delivery. Oversees operational activities of the website(s) with specific attention aimed at content creation and website maintenance.

12.2 Web Designer – Senior

Description: Under general direction, designs and builds web pages using a variety of graphics software applications, techniques, and tools. Designs and develops user interface features, site animation, and special-effects elements. Contributes to the design group's efforts to enhance the look and feel of the organization's online offerings. Designs the website to support the organization's strategies and goals relative to external communications. Requires understanding of web-based technologies and thorough knowledge of HTML, PhotoShop, Illustrator, and/or other design-related applications.

12.3 Web Designer – Intermediate

Description: Under general supervision, designs and develops user interface features, site animation, and special-effects elements. Contributes to the design group's efforts to enhance the look and feel of the organization's online offerings. Designs the website to support the organization's strategies and goals relative to external communications. Develops applications based on current, new, and future net-based applications. Requires significant graphics and design experience as well as HTML knowledge.

12.4 Web Designer – Associate

Description: Under direct supervision assists in designing and developing user interface features, site animation, and special-effects elements. Assists in designing the website to support the organization's strategies and goals relative to external communications. Requires graphics and design experience as well as HTML knowledge.

12.5 Web Software Developer – Senior

Description: Under general direction, designs, develops, troubleshoots, debugs, and implements software code (such as HTML, CGI, and JavaScript) for a 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 transaction systems using

application servers. Researches, tests, builds, and coordinates the integration of new products per production and client requirements. Requires strong navigation and site-design instincts.

12.6 Web Software Developer – Intermediate

Description: Under general supervision, develops, codes, tests, and debugs new software and enhancements to existing web software. Competent to work on fairly complex programs with guidance. Works with technical staff to understand problems with web software and resolve them.

12.7 Web Software Developer – Associate

Description: Under direct supervision, assists in developing, coding, testing, and debugging new software and enhancements to existing web software.

12.8 Web Technical Administrator

Experience/Education: Minimum of 10 years of experience and MA/MS degree Description: In role of onsite administrator, responsible for achieving overall technical integrity of organization's website. Maintains and upgrades hardware and software including website technical architecture related to hardware and telecommunication connectivity. Administers email, chat, and FTP services. Communicates router configuration changes and troubleshoots system errors and bugs. Maintains servers, creates monitoring reports, and logs, and ensures functionality of links. Monitors site for acceptable performance and user accessibility. Establishes backups and monitors site security.

12.9 Web Content Administrator

Experience/Education: Minimum of 10 years of experience and MA/MS degree Description: Responsible for developing and providing content that will motivate and entertain users so that they regularly access the website and utilize it as a major source for information and decision-making. Responsible for managing/performing website editorial activities including gathering and researching information that enhances the value of the site. Locates, negotiates, and pursues content. Seeks out customers to gather feedback for website improvement and enhancements. Requires experience in production management, web page design, HTML, and web graphics types and standards.

13. Network Administration/Support

SOC No. 15-1142, Network and Computer System Administrator, Network Coordinator
SOC No. 15-1152, Network Technician, Network Support Technician, Network Diagnostic Support Technician

13.1 Network Administrator – Senior

Description: Under general direction, responsible for the acquisition, installation, maintenance, and usage of the company's LAN. Studies contractor products to determine those which best meet company needs; assists in presentation of information to management resulting in purchase and installation of hardware, software, and telecommunication equipment. Manages network performance and maintains network security. Ensures that security procedures are implemented and enforced. Installs all network software. Evaluates, develops, and maintains

telecommunications systems. Troubleshoots network problems. Establishes and implements network policies, procedures and standards and ensures their conformance with information systems and company's objectives. Trains users on network operation.

13.2 Network Administrator – Intermediate

Description: Under general supervision, responsible for the acquisition, installation, maintenance, and usage of the organization's LAN. Manages network performance and maintains network security. Ensures that security procedures are implemented and enforced. Installs all network software. Evaluates, develops, and maintains telecommunications systems. Troubleshoots network problems. Establishes and implements network policies, procedures, and standards and ensures their conformance with information systems and organization objectives. Trains users on network operation. Frequently reports to a PC support manager or Senior Network Administrator.

13.3 Network Administrator – Associate

Description: Under direct supervision, assists in the installation, maintenance, and usage of the organization's LAN. Assists in the establishment of network procedures regarding access methods and time, security validation checks, and documentation. Maintains network software and hardware inventories. Researches software and hardware issues regarding the network. Inform users when there are network problems. Monitors and maintains continuity with software licensing and maintenance agreements. Troubleshoots network problems. Frequently reports to a PC Support Manager or Senior Network Administrator

13.4 Network Support Technician – Senior

Description: Under general direction, monitors and responds to complex technical control facility hardware and software problems utilizing a variety of hardware and software testing tools and techniques. Provides primary interface with contractor support service groups or provides internal analysis and support to ensure proper escalation during outages or periods of degraded system performance. May provide network server support. Requires extensive knowledge of PC/network communications hardware/software in a multi-protocol environment, and network management software. May function as lead providing guidance and training for less experienced technicians.

13.5 Network Support Technician – Intermediate

Description: Under general supervision, monitors and responds to technical control facility hardware and software problems utilizing hardware and software testing tools and techniques. May interface with contractor support service groups to ensure proper escalation during outages or period of degraded system performance. May assist with installation of terminals and associated hardware. May provide network server support. Requires strong knowledge of PC/Network communications hardware/software, in a multi-protocol environment, and network management software.

13.6 Network Support Technician – Associate

Description: Under direct supervision, assists in monitoring and responding to technical control facility hardware and software problems utilizing hardware and software testing tools and techniques. May provide network server support. May assist with installation of terminals and

associated hardware. Requires knowledge of data scopes, patch panels, modems, concentrators, and associated terminals and network management software.

14. Documentation

SOC No. 27-3041, Technical Editor

SOC No. 27-3042, Technical Writer, Documentation Writer

SOC No. 17-3010, Drafters

SOC No. 17-3019, Drafter, All Others

SOC No. 27-1024, Graphics Artist, Graphics Designer

14.1 Documentation Specialist – Senior

Description: Under general direction, is responsible for preparing and/or maintaining systems, programming, and operations documentation, procedures, and methods including user manuals and reference manuals. Maintains a current internal documentation library. Provides or coordinates special documentation services as required. Competent to work at the highest level of all phases of documentation. May act as project leader for large jobs.

14.2 Documentation Specialist – Intermediate

Description: Under general supervision, prepares and/or maintains systems, programming, and operations documentation, including user manuals. Maintains a current internal documentation library. Competent to work on most phases of documentation.

14.3 Documentation Specialist – Associate

Description: Under direct supervision, prepares and/or maintains systems, programming, and operations documentation, including user manuals. Maintains a current internal documentation library.

14.4 Technical Editor

Experience/Education: Minimum of 10 years of experience and MA/MS degree Description: Responsible for content of technical documentation. Checks author's document for spelling, grammar, and content problems (*e.g.*, missing instructions or sections; redundant or unnecessary sections). Accuracy of content may fall under this position or the programmer, depending on the expertise of the editor. Ensures that documents follow the style laid out in the organization's style guide. May also be responsible for maintaining the style guide. Suggests revisions to the style guide as appropriate. Editor is often a technical writer who has moved to this position.

14.5 CAD Specialist

Experience/Education: Minimum of 5 years of experience and BA/BS degree Description: Ability to prepare various drawings that communicate engineering ideas, designs, and information in support of engineering functions directly supporting infostructure IT goals and projects. Drawings consist of parts and assemblies including sectional profiles, irregular or reverse curves, hidden lines, and small or intricate details. Requires experience in current conventional computer-aided design drafting techniques and application programs.

14.6 Graphics Specialist

Experience/Education: Minimum of 5 years of experience and BA/BS degree Description: Responsible for graphics design and use, operation, and setup of computer graphic systems for business communications. Executes graphic projects and assists in coordination of all graphic production scheduling; coordinates production support with outside contractors, as needed. Ensures that graphic projects are completed on time, within budget and to user's satisfaction. Interfaces with users to determine scope of project and best graphic medium. Trains other personnel in proper use of computer graphic equipment. Troubleshoots computer equipment problems and performs minor preventive maintenance.

14.7 Draftsman – Senior

Description: Under indirect supervision, responsible for preparing various drawings that communicate engineering ideas, designs, and information in support of engineering functions directly supporting DoD Enterprise infrastructure and infostructure IT goals and projects. Drawings consist of parts and assemblies including sectional profiles, irregular or reverse curves, hidden lines, and small or intricate details. Requires experience in current conventional computer-aided design drafting techniques and application programs.

14.8 Draftsman – Intermediate

Description: Under general direction, responsible for preparing various drawings that communicate engineering ideas, designs, and information in support of engineering functions directly supporting DoD Enterprise infrastructure and infostructure IT goals and projects. Drawings consist of parts and assemblies including sectional profiles, irregular or reverse curves, hidden lines, and small or intricate details. Requires experience in current conventional computer-aided design drafting techniques and application programs.

14.9 Draftsman – Associate

Description: Under immediate supervision, responsible for preparing various drawings that communicate engineering ideas, designs, and information in support of engineering functions directly supporting DoD Enterprise infrastructure and infostructure IT goals and projects. Drawings consist of parts and assemblies including sectional profiles, irregular or reverse curves, hidden lines, and small or intricate details. Requires experience in current conventional computer-aided design drafting techniques and application programs.

15. Enterprise Resource Planning (ERP)/Business Process Development

SOC No. 13-2031, Budget Analyst, Cost Analyst

SOC No. 13-1111, Business Management Analyst, Management Analyst

SOC No. 13-1081, Logistics Analyst

SOC No. 15-1121, Data Processing Systems Analyst, Computer Systems Analyst, Information Systems Analyst

SOC No. 15-1122, Network Security Analyst

SOC No. 15-2031, Operations Analyst, Operations Research Analyst, Procedure Analyst, Process Analyst

SOC No. 15-2041, Statistical Analyst

15.1 ERP Business Analyst – Senior

Description: Under general direction, serves as senior subject matter expert associated with content, processes and procedures associated with ERP. Defines the detailed requirements, analyzes the business needs, and validates solutions with the client. Details requirements through the product development and other functions to support the project team. Monitors other business analysts in software development methods and processes and implementation of those methods. Evaluates development projects and assists in tailoring the development process to meet the project needs.

15.2 ERP Business Analyst – Intermediate

Description: Under general supervision, serves as subject matter expert associated with content, processes, and procedures associated with enterprise applications. Applies functional knowledge to design and customization of workflow systems that provide seamless integration for client/server applications. Writes functional requirements, develops test plans, and works with production issues.

15.3 ERP Business Analyst – Associate

Description: Under direct supervision, serves as subject matter expert associated with content, processes and procedures associated with enterprise applications. Applies functional knowledge to design and customization of workflow systems that provide seamless integration for client/server applications. Writes functional requirements, develops test plans, and works with production issues.

15.4 Business Systems Analyst – Senior

Description: Under general direction, formulates and defines systems scope and objectives based on both user needs and a good understanding of applicable business systems and industry requirements. Devises or modifies procedures to solve complex problems considering computer equipment capacity and limitations, operating time, and form of desired results. Includes analysis of business and user needs, documentation of requirements, and translation into proper system requirement specifications. Guides and advises less experienced Business Systems Analysts. Competent to work at the highest technical level of most phases of systems analysis while considering the business implications of the application of technology to the current and future business environment.

15.5 Business Systems Analyst – Intermediate

Description: Under general supervision, formulates and defines systems scope and objectives through research and fact-finding combined with an understanding of applicable business systems and industry requirements. With this knowledge, develops or modifies moderately complex information systems. Includes analysis of business and user needs, documenting requirements, and revising existing system logic difficulties, as necessary. Guides and advises less experienced Business Systems Analysts. Competent to work in some phases of systems analysis and considers the business implications of the application of technology to the current business environment.

15.6 Business Systems Analyst – Associate

Description: Under direct supervision, assists in formulating and defining systems scope and objectives through research and fact-finding combined with a basic understanding of business systems and industry requirements. Includes analysis of business and user needs, documenting requirements, and revising existing system logic difficulties as necessary under direction of experienced Business System Analysts. Competent to consider most business implications of the application of technology to the current business environment.

16. Information Systems Training

SOC No. 13-1151, Corporate Trainers, Training Specialists, Training and Development Specialists

SOC No. 11-3131, Training Managers, Training and Development Managers

16.1 Information Systems Training Manager

Experience/Education: Minimum of 10 years of experience and MS/PhD degree Description: Responsible for all activities associated with education programs for both the IT and end-user/PC personnel. Advises on administrative policies and procedures, technical problems, priorities, and methods. Assigns personnel to the various training tasks and directs their activities, reviews, and evaluates their work, conducts performance appraisals, and makes decisions on personnel.

16.2 Information Systems Training Specialist – Senior

Description: Under general direction, organizes, prepares, and conducts complex training and educational programs for information systems or user personnel. May design and develop inhouse programs. Maintains records of training activities, employee progress, and program effectiveness. Competent to work at the highest level of all phases of information systems training.

16.3 Information Systems Training Specialist – Intermediate

Description: Under general supervision, organizes and conducts moderately complex training and educational programs for information systems or user personnel. Maintains records of training activities, employee progress, and program effectiveness. Competent to work on most phases of information systems training.

16.4 Information Systems Training Specialist – Associate

Description: Under direct supervision, organizes and conducts basic training and educational programs for information systems or user personnel. Maintains record of training activities, employee progress, and program effectiveness.

16.5 Instructor Technical Training – Senior

Description: Under indirect supervision, responsible for provides technical expertise and instruction according to customer specifications and standards (operate, maintain, and repair in classroom or laboratory settings) supporting DoD Enterprise infrastructure and infostructure IT goals and projects. Analyzes System and Network related information and interprets it into useable instruction/training for intended audience. Develops courseware/content in specific technical

subject matter area. Provides advice to customers in system design and optimal configuration. Provides technical telephone support to customers with hardware and software problems. Also, provides technical and training input for development of training proposals. May be required to deploy and train U.S. Forces in CONUS or OCONUS field locations.

16.6 Instructor Technical Training – Intermediate

Description: Under general direction, responsible for provides technical expertise and instruction according to customer specifications and standards (operate, maintain, and repair in classroom or laboratory settings) supporting DoD Enterprise infrastructure and infostructure IT goals and projects. Analyzes System and Network related information and interprets it into useable instruction/training for intended audience. Develops courseware/content in specific technical subject matter area. Provides advice to customers in system design and optimal configuration. Provides technical telephone support to customers with hardware and software problems. Also, provides technical and training input for development of training proposals. May be required to deploy and train U.S. Forces in CONUS or OCONUS field locations.

16.7 Instructor Technical Training – Associate

Description: Under immediate supervision, responsible for provides technical expertise and instruction according to customer specifications and standards (operate, maintain, and repair in classroom or laboratory settings) supporting DoD Enterprise infrastructure and infostructure IT goals and projects. Analyzes System and Network related information and interprets it into useable instruction/training for intended audience. Develops courseware/content in specific technical subject matter area. Provides advice to customers in system design and optimal configuration. Provides technical telephone support to customers with hardware and software problems. Also, provides technical and training input for development of training proposals. May be required to deploy and train U.S. Forces in CONUS or OCONUS field locations.

17. Audio Visual

SOC No. 17-2061, Computer Hardware Engineer

SOC No. 17-2199, Engineer, all others

SOC No. 15-1130, Software Developers and Programmers

SOC No. 15-1131, System Programmers, Computer Language Coders

17.1 Audio Visual Fabrication Engineer – Senior

Description: Under indirect supervision, installs, pulls, terminates, and tests all audio visual (AV) type cables, connectors, and interfaces. Ability to install projections screens, plasma TVs and different types of speakers. Installation of AV systems on client sites. Read blueprints and wire AV racks. Manage AV projects with various models and makes of equipment. Has a thorough understanding and working knowledge of testing, analyses, and corrective action on systems, networks, hardware, and software in a Professional Audio/Video environment. Knows and understands all wire and connector types on all AV related cable.

17.2 Audio Visual Fabrication Engineer – Intermediate

Description: Under general direction, installs, pulls, terminates, and tests all AV type cables, connectors, and interfaces. Ability to install projections screens, plasma TVs and different types of speakers. Installation of AV systems on client sites. Read blueprints and wire AV racks. Manage AV projects with various models and makes of equipment. Has a thorough understanding and working knowledge of testing, analyses, and corrective action on systems, networks, hardware, and software in a Professional Audio/Video environment. Knows and understands all wire and connector types on all AV related cable.

17.3 Audio Visual Fabrication Engineer – Associate

Description: Under immediate supervision, installs, pulls, terminates, and tests all AV type cables, connectors, and interfaces. Ability to install projections screens, plasma TVs and different types of speakers. Installation of AV systems on client sites. Read blueprints and wire AV racks. Manage AV projects with various models and makes of equipment. Has a thorough understanding and working knowledge of testing, analyses, and corrective action on systems, networks, hardware, and software in a Professional Audio/Video environment. Knows and understands all wire and connector types on all AV related cable.

17.4 Audio Visual Programmer – Senior

Description: Under indirect supervision, designs, and programs control interface touch panels for AV systems. Works with Design Engineer and Contracting Officer's Technical Representative to ensure a user-friendly operating environment for controlling audio/visual equipment. Provide training to users to ensure proper use and care.

17.5 Audio Visual Programmer – Intermediate

Description: Under general direction, designs, and programs control interface touch panels for AV systems. Works with Design Engineer and Contracting Officer's Technical Representative to ensure a user-friendly operating environment for controlling audio/visual equipment. Provide training to users to ensure proper use and care.

17.6 Audio Visual Programmer – Associate

Description: Under immediate supervision, designs, and programs control interface touch panels for audio visual systems. Works with Design Engineer and Contracting Officer's Technical Representative to ensure a user-friendly operating environment for controlling audio/visual equipment. Provide training to users to ensure proper use and care.

18. Intelligent Automation [Artificial Intelligence (AI)/Robotic Process Automation (RPA)]

Robotic Process Automation (RPA) is an emerging technology area that has not been officially defined by NIST but is being promoted as a commercial solution.

18.1 Artificial Intelligence (AI) Engineer – Intermediate

Description: An artificial intelligence engineer is an individual who works with traditional machine learning techniques like natural language processing and neural networks to build models that power AI-based applications. An AI programmer helps develop operating software that can

be used for robots, AI programs or other AI applications. They may work closely with electrical engineers or robotics engineers and others in order to produce systems that utilize AI. This is the capability of adapting or changing based on adding data. It may also mean programming a system to look for or seek out specific conditions and respond based on those factors. Candidates should possess excellent math, science, and analytical skills necessary to solve complex problems and find efficient solutions.

18.2 Machine Learning Engineer – Intermediate

Description: Machine learning is a form of AI that enables a system to learn from data rather than through explicit programming. Once an ML program is written, it must be “trained” before it is deployed in its intended use. Training is the process by which the machine learns. The programming utilizes algorithms that ingest training data supplied by a machine learning engineer, making it possible to produce more precise models based on that data.

18.3 Machine Learning (Data) Scientist – Senior

Description: Data science can be described as the description, prediction, and causal inference from both structured and unstructured data. This discipline helps individuals and enterprises make better business decisions. It’s also a study of where data originates, what it represents, and how it could be transformed into a valuable resource. To achieve the latter, a massive amount of data has to be mined to identify patterns to help businesses. The field of data science employs computer science disciplines like mathematics and statistics and incorporates techniques like data mining, cluster analysis, visualization, and machine learning.

19. Cloud Services

19.1 Cloud Architect – Intermediate

Description: A cloud architect, or cloud computing architect, is responsible for setting up all of the components required for successful cloud computing. A cloud computing network, as opposed to a more traditional computer network, involves storing and managing data across a number of remotely located servers, rather than a local server. Cloud architects are in charge of creating these cloud networks by connecting remotely located servers. This involves setting up front- and back-end platforms and developing an operational cloud based delivery system. A strong background in scripting and programming languages. Cloud architects combine a technical education background with a number of years of work experience in the field of computing and technology.

19.2 Cloud Developer – Associate

Description: A professional Cloud Developer builds scalable and highly available applications using virtual systems, practices, and tools. They design and implement cloud infrastructures, and ensure the effective design of business processes in the cloud. They have a deep understanding of cloud provider architectures and are able to monitor cloud maintenance, planning, security and usage across the company.

19.3 Cloud DevOps Engineer – Intermediate

Description: A DevOps engineer is an IT professional who is responsible for bridging software development, engineering, and management to make the software development process faster. A DevOps engineer introduces processes, tools, and methodologies to balance needs throughout the software development life cycle, from coding and deployment, to maintenance and updates.

19.4 Cloud Engineer – Senior

Description: Under general supervision, has duties of instructing, directing, and checking the work of other project engineers. Responsible for the completion of assigned engineering projects within budgetary and scheduling guidelines. Leads a group of engineers, analysts, and/or technicians assigned for the duration of a project or may function as ongoing lead within a group of engineers associated with one or more technical areas within the telecom function (such as, but not limited to, network design, engineering, implementation, or operations/user support). Does not have formal supervisory responsibilities, although may provide input for (project) team member performance appraisals.

19.5 Cloud Engineer – Intermediate

Description: A cloud engineer is an IT expert responsible for the design, planning, management, maintenance, and support, and any other technological duties associated with an organization's cloud computing environment. Cloud operations engineers specialize in creating and implementing cloudbased solutions such as Software as a Service (SaaS) and Platform as a Service (PaaS).

19.6 Cloud Network Engineer – Intermediate

Description: Cloud network engineering roles assess an organization's technology infrastructure and explore options for moving to the cloud. If the organization elects to move to the cloud, a cloud engineer is responsible for overseeing the process, referred to as migration, and maintaining the new system. Job Duties: Implement, support, maintain, and optimize the network hardware, software, and communications links of the company's cloud infrastructure.

19.7 Cloud Security Engineer – Intermediate

Description: Cloud security engineers specialize in providing security systems and tools management related to the cloud technologies and playing a vital role in protecting an organization's data. A cloud security engineer specializes in providing security for cloud-based digital platforms and plays an integral role in protecting an organization's data. This may involve analyzing existing cloud structures and creating new and enhanced security methods. They often serve as part of a larger team dedicated to cloud-based management and security. Cloud security engineers usually work full-time in an office environment, with some positions requiring personnel to respond to after-hours emergencies.

19.8 Platform Engineer – Intermediate

Description: Platform engineers enable application developers to put software into the hands of users in an easier manner. This is the case when there is integration between on premise systems and cloud services. Platform engineers build systems that allow teams to build on. A platform

engineer writes code that bridges the gap between software and hardware and tests the system so that it runs effectively and smoothly

19.9 Test Engineer – Intermediate

Description: A test engineer is a professional who determines how to create a process that would best test a particular product in manufacturing and related disciplines, in order to assure that the product meets applicable specifications. Test engineers are also responsible for determining the best way a test can be performed in order to achieve adequate test coverage.

19.10 User Interface, User Experience (UI/UX) Designer – Associate

Description: UI Designer/Developer III designs web pages and develops web-based technical solutions that engage users and meet business requirements. Handles projects from conceptualization through delivery. A UI Designer/Developer III develops and applies creative designs, ensuring that content meets brand standards and targets the intended audience.

20. Data Services

20.1 Data Architect – Senior

Description: Data architects focus on how information moves across the system from one application to another. Demonstrated expertise in requirements engineering, software architecture, software testing, and software deployment including understanding how the software interacts with the technical architecture. Data architects allow a company to easily publish and share their data with others in the industry, data architects design database systems. By creating the system according to industry standards, they also help a business accurately report information to the necessary bureaus. First, the architect may review any data architecture already in place, while also determining the specifications for the size of the new system. The databases they create organize large bits of information, such as company spending. Additionally, they design with growth in mind, allowing for future modifications to the database as the company develops.

20.2 Data Engineer – Intermediate

Description: Under general supervision, carries out procedures to ensure that all information systems products and services meet minimum organization standards and end-user requirements. Thoroughly tests software to ensure proper operation and freedom from defects. Documents and works to resolve all problems. Reports progress on problem resolution to management. Devises improvements to current procedures and develops models of possible future configurations. Performs workflow analysis and recommends quality improvements.

20.3 Data Labeler – Intermediate

Description: Data labeling is the manual curation of data by humans on machine learning and AI applications. Data Steward coordinates an organization's quality, security, and maintenance of data. Defines data elements and establishes policies and procedures related to the collection and accuracy of data, and performs tests on data systems. Being a Data Steward ensures sufficient data quality is maintained so that the data can effectively support the business process.

20.4 Data Scientist – Senior

Description: Data Scientists build analytics tools that utilize the data pipeline to provide actionable insights into customer acquisition, operational efficiency, and other key business performance metrics. Create data tools for analytics and data scientist team members that assist them in building and optimizing products. Communicate effectively through listening, documentation, and presentations, especially using compelling visualization tools to share analysis and interpretation of data.

20.5 Operations Research and Systems Analyst (ORSA) – Intermediate

Description: Operations research analysts use advanced mathematical and analytical methods to help solve complex issues.