



AUTHORIZED FEDERAL SUPPLY SERVICE  
INFORMATION TECHNOLOGY SCHEDULE PRICELIST  
GENERAL PURPOSE COMMERCIAL INFORMATION TECHNOLOGY  
EQUIPMENT, SOFTWARE AND SERVICES

[Knight Point has been awarded all SINs under the cooperative purchasing and disaster recovery programs.](#)

**SIN 132-40 - CLOUD COMPUTING SERVICES**

**SIN 132-51 - INFORMATION TECHNOLOGY (IT) PROFESSIONAL SERVICES**

- Note 1:** All non-professional labor categories must be incidental to and used solely to support hardware, software and/or professional services, and cannot be purchased separately.
- Note 2:** Offerors and Agencies are advised that the Group 70 – Information Technology Schedule is not to be used as a means to procure services which properly fall under the Brooks Act. These services include, but are not limited to, architectural, engineering, mapping, cartographic production, remote sensing, geographic information systems, and related services. FAR 36.6 distinguishes between mapping services of an A/E nature and mapping services which are not connected nor incidental to the traditionally accepted A/E Services.
- Note 3:** This solicitation is not intended to solicit for the reselling of IT Professional Services, except for the provision of implementation, maintenance, integration, or training services in direct support of a product. Under such circumstances the services must be performance by the publisher or manufacturer or one of their authorized agents.

**SIN 132-52 ELECTRONIC COMMERCE AND SUBSCRIPTION SERVICES**

<p><b>Knight Point Systems, LLC</b> 1775 Wiehle Avenue, Suite 101 Reston, VA 20190-5109 Phone: 703-307-5926 Fax: 703-234-5740 <a href="http://www.knightpoint.com">www.knightpoint.com</a></p>
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Contract Number: GS-35F-0646S

**Period Covered by Contract: September 25, 2006 through September 24, 2016**

General Services Administration  
Federal Supply Service

Pricelist through Modification 25, effective March 1, 2016

Products and ordering information in this Authorized FSS Information Technology Schedule Pricelist are also available on the GSA Advantage! System. Agencies can browse GSA Advantage! by accessing the Federal Supply Service's Home Page via the Internet at <http://www.fss.gsa.gov/>

<b>INFORMATION FOR ORDERING ACTIVITIES          APPLICABLE TO ALL SPECIAL ITEM NUMBERS</b>
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**1a. AUTHORIZED SPECIAL ITEM NUMBERS (SINs):**

<u>SIN</u>	<u>DESCRIPTION</u>
132-40, 132-40 ST/LOC, 132-4 RC	Cloud Computing Services
132-51, 132-51 ST/LOC, 132-51 RC	Information Technology Professional Services
132-52, 132-52 ST/LOC, 132-51 RC	Electronic Commerce and Subscription Services

**1b. Lowest Priced Model Number and Price for each SIN:** See Price List

**1c. SERVICES OFFERED:** See Price List

**2. MAXIMUM ORDER PER SIN:**

<u>SIN</u>	<u>MAXIMUM ORDER</u>
132-40, 132-40 ST/LOC, 132-4 RC	\$500,000 per SIN/Order
132-51, 132-51 ST/LOC, 132-51 RC	\$500,000 per SIN/Order
132-52, 132-52 ST/LOC, 132-51 RC	\$500,000 per SIN/Order

This maximum order threshold is a dollar amount at which it is suggested that the ordering agency request higher discounts from the contractor before issuing the order. The contractor may: (1) Offer a new lower price, (2) Offer the lowest price available under the contract, or (3) Decline the order within five (5) days. In accordance with the Maximum Order provisions contained in the Schedule, a delivery order may be placed against the Schedule contract even though it exceeds the maximum order threshold.

**3. MINIMUM ORDER LIMITATION:** \$100

**4. GEOGRAPHIC COVERAGE (DELIVERY AREA):** The geographic scope of this contract is the 48 contiguous states, Alaska, Hawaii, Puerto Rico, Washington, DC, and U.S. Territories

**5. POINT OF PRODUCTION:** United States

**6. BASIC DISCOUNT:** Prices listed are net, discounts have been deducted and the industrial funding fee has been added

**7. QUANTITY DISCOUNT:** None

**8. PROMPT PAYMENT TERMS:** Net 30

- 9a. **GOVERNMENT PURCHASE CARDS ARE ACCEPTED UP TO THE MICRO-PURCHASE THRESHOLD.**
- 9b. **GOVERNMENT PURCHASE CARDS ARE ACCEPTED ABOVE THE MICRO-PURCHASE THRESHOLD.**
10. **FOREIGN ITEMS:** None
- 11a. **TIME OF DELIVERY:** As negotiated with the Ordering Agency
- 11b. **EXPEDITED DELIVERY:** Contact Contractor
- 11c. **OVERNIGHT AND 2-DAY DELIVERY:** Contact Contractor
- 11d. **URGENT REQUIREMENTS:** Contact Contractor
12. **F.O.B. POINT:** FOB Destination
- 13a. **ORDERING ADDRESS:** Knight Point Systems, LLC  
1775 Wiehle Avenue, Suite 101  
Reston, VA 20190-5109
- 13b. **ORDERING PROCEDURES:** *For supplies and service the ordering procedures, information on Blanket Purchase Agreements (BPAs), and a sample BPA may be found at the GSA/FSS Schedule homepage ([gss.gsa.gov/schedule](http://gss.gsa.gov/schedule)).*
14. **PAYMENT ADDRESS:** Same as Ordering Address
15. **WARRANTY PROVISION:** Standard Commercial Warranty
16. **EXPORT PACKING CHARGES:** Not Applicable
17. **TERMS AND CONDITIONS OF GOVERNMENT PURCHASE CARD ACCEPTANCE:** None
18. **TERMS AND CONDITIONS OF RENTAL:** Not Applicable
19. **TERMS AND CONDITIONS OF INSTALLATION:** Not Applicable

- 20. TERMS AND CONDITIONS OF REPAIR PARTS:** Not Applicable
- 20a. TERMS AND CONDITIONS FOR ANY OTHER SERVICES:** See Terms and Conditions Section
- 21. LIST OF SERVICE AND DISTRIBUTION POINTS:** None
- 22. LIST OF PARTICIPATING DEALERS:** None
- 23. PREVENTIVE MAINTENANCE:** See Pricelist for available options
- 24a. SPECIAL ATTRIBUTES:** Not Applicable
- 24b. SECTION 508 COMPLIANCE INFORMATION:** Not Applicable
- 25. DATA UNIVERSAL NUMBER SYSTEM (DUNS) NUMBER:** 622594492
- 26. CONTRACTOR HAS REGISTERED IN THE SYSTEM FOR AWARD MANAGEMENT (SAM) DATABASE.**  
**CAGE CODE: 4CRC1**

# ***KNIGHT POINT'S AUTHORIZED GSA SCHEDULE LABOR CATEGORIES***

## **Subject Matter Expert**

The Subject Matter Expert (SME) shall possess at least 15 years of defense or industrial experience in their recognized field of expertise. The SME generally has an advanced degree, but it is not required. A person is typically designated as a SME by a consistent and widespread reputation across the community and discipline in which they work and it is indicative of compensation which is well above the norm if solely based on degree or years of experience. Education requirement is Bachelor's degree or equivalent

## **Business Process Consultant**

The Business Process Consultant shall possess at least twelve (12) years experience applying process improvement and reengineering methodologies and principles necessary to conduct system modernization projects. Formulates and defines systems scope and objectives based on both user needs and a good understanding of applicable business systems and industry requirements. Duties include activity and data modeling, development of system methods, and creating and assessing system performance measurements. Devises or modifies procedures to solve complex problems considering computer equipment capacity and limitations, operating time, and form of desired results. Education requirement is a Bachelor's degree or equivalent.

## **Sr. Applications Consultant (Enterprise Systems Certified)**

At least eight (8) years relevant experience and three (3) years experience with enterprise software. Provides consultation and support in enterprise systems software and information technology services. Functional expertise in relevant domain area such as systems management, systems testing, system analysis and design. Education requirement is Bachelor's degree or equivalent and Certification in enterprise systems/applications.

## **Data Migration III**

At least fifteen (15) years data management experience with multi-terabyte data warehouse/mart implementations spanning multiple database platforms and an understanding of data management techniques. Must possess a demonstrated knowledge/understanding of Extraction, Transformation and Loading tools and database systems. Educational requirement is a Bachelor's degree or equivalent.

## **Program Manager III**

At least ten (13) years relevant experience. Directs the performance of a variety of related projects, which may be organized by technology, program or client. Acts as the overall lead, manager and administrator for the contract effort. Experience in project development from inception to deployment, expertise in the management and control of funds and resources using complex reporting mechanisms, demonstrated capability in managing multi-task contracts and/or subcontracts of various types and complexity. Serves as the primary interface and point of contact with government program authorities and representatives on technical and program/project issues. Education requirement is Bachelor's degree or equivalent and PMP certification.

## **Subject Matter Expert II**

The Subject Matter Expert (SME) shall possess at least 10 years of defense or industrial experience in their recognized field of expertise. The SME generally has an advanced degree, but it is not required. A person is typically designated as a SME by a consistent and widespread reputation across the community and discipline in which they work and it is indicative of compensation which is well above the norm is solely based on degree or years of experience. Education requirement is a Bachelor's degree or equivalent.

## **Applications Consultant (Enterprise Systems Certified)**

At least four (4) years relevant experience and one (1) year experience with enterprise software. Provides consultation and support in enterprise systems software configuration and implementation. Functional expertise in relevant domain area such as systems management, systems testing, system analysis and design. Education requirement is Bachelor's degree or equivalent and Certification in enterprise systems/applications.

**Data Migration II**

At least eight (8) years data management experience with multi-terabyte data warehouse/mart implementations spanning multiple database platforms and an understanding of data management techniques. Must possess a demonstrated knowledge/understanding of Extraction, Transformation and Loading tools and database systems. Educational requirement is a Bachelor's degree or equivalent

**Relocation Analyst III**

Must possess a minimum of twelve (12) years experience with data center relocations. Must be experienced with providing oversight and support to relocation efforts. Relocation experience preferred with working knowledge of virtualization techniques and methods, exposure to physical and logical data center relocation activities is required. Project management experience is required. Certifications are a plus. Required to have a working knowledge of Microsoft Office, including Project. Education requirement is a Bachelor's Degree.

**Database Architect Principal**

At least four (4) years of applicable experience, of which one year is specialized. Specialized experience includes using current DBMS technologies, performing application design utilizing various DBMS, and working with DBMS internals. Other responsibilities include: assisting the project manager as necessary; providing technical assistance to project team members; participating in management-level presentations of project status; assisting in preparation of monthly status reports; performing technical duties as a member of the project team. In addition the Database Specialist is able to perform the responsibilities of a lower level Database Analyst/Management Specialist. These include: database design; application support; software installations; performance monitoring; conducting user training. Education requirement is Bachelor's degree or equivalent.

**VOIP Consultant**

Must possess a minimum of eight (8) years experience in telephone and VOIP networks. Must also be experienced with data networking, web services technologies, server platforms and operating systems, software development and service development lifecycles. Education requirement is a Bachelor's Degree or equivalent experience.

**Relocation Analyst II**

Must possess a minimum of six (6) years experience with data center relocations. Relocation experience preferred with working knowledge of virtualization techniques and methods, exposure to physical and logical data center relocation activities is required. Education requirement is a Bachelor's Degree.

**Project Manager**

At least ten (10) years relevant experience and five (5) years experience with enterprise software implementations. Provides full project management responsibility for system implementation at site, including planning and coordinating project activities and staff, managing costs, and ensuring quality and schedule compliance. Education requirement is Bachelor's degree or equivalent and Certification in enterprise systems/applications.

**Data Architect**

At least two (2) years experience working in a data warehouse environment, which includes data design, database architecture, metadata, and repository creation. Defines, designs, and builds dimensional databases. Duties include developing data, evaluating hardware and software platforms, and integrating systems. Additional duties include evaluating reusability of current data for additional analyses and conducting 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. Education requirement is Bachelor's degree or equivalent.

**Security C&A-Description:**

Must possess a minimum of 10-15 years experience. Certification and Accreditation Certification Officers (CACOs) advise and assist the Sponsor's customers with the Lifecycle Certification and Accreditation (C&A) process and developing a Systems Security Plan (SSP). Acts as C&A project register, managing the C&A process. Develop risk assessment reports: Based on review of SSP and interviews with developer/customer, assess systems against Intelligence Community Information Assurance policies and regulations, analyze risk, recommend mitigating countermeasures, and write short, succinct risk assessment and certification reports for submission to the Chief Information Officer and Executive Director. Assemble and submit C&A packages to Principal Accreditation Authority/Designated Accreditation Authority. Educational requirement is a BS/BA degree or equivalent.

**RF Engineer**

Must possess a minimum of five (5) years experience in. Experience in design, analysis, development, and modification of RF equipment and systems. Knowledge of test methods including system validation. Requires experience in analyzing test data. Responsibilities include developing interface standards and test plans/test procedures. Educational requirement is a Bachelor's degree or equivalent.

**Disaster Recovery Specialist I**

The Disaster Recovery Specialist shall possess at least three (3) years previous experience in information technology recovery or technology disaster recovery planning required. General knowledge of business technology programs/platforms required. Strong verbal and written communication skills are desirable. Provide support in the development of a government agency's information technology emergency management and recovery plans; perform functions pertaining to the agencies information technology network risk assessments; review and develop network and system recovery strategies; draft procedures for identifying system failures and involving contingency plans; create response procedures; communicate with various response teams during testing and actual execution of system and/or network recovery procedures. Support the design, development, installation, implementation and administration of backup solutions. Education requirement is Bachelor's degree or equivalent.

**UNIX Relocation Analyst II**

Must possess a minimum of five (5) years UNIX system administration experience with solid exposure to one other discipline. Wintel, FW, NW, Enterprise Monitoring, SAN, AIX Web and Middle Tier Apps. Additionally, must be experienced in application architecture analysis. Education requirement is Bachelor's degree or equivalent.

**Technician III**

At least three (3) years of applicable experience in performing tests on systems components to determine operability, trouble-shooting, making required repairs, and installing and maintaining computer networks. Education requirement is Associate's degree or equivalent.

**Configuration Management Specialist**

At least three (3) years experience providing an analysis of requirements for configuration management control. Develops and maintains a configuration plan. Analyses proposed product design changes to determine the effect on overall system. Implements directives and schedules necessary to ensure effective system management. Educational requirement is a Bachelor's degree.

**Relocation Analyst/Help Desk Specialist**

Relocation Analyst/Help Desk Specialist shall possess one to two years of experience. Provides phone and in-person support to system relocation preparations and execution, developed under this contract or predecessors. Person serves as the initial point of contact for technical issues prior to and following data center relocations. Education requirement is a Bachelor's Degree or equivalent.

**Technician II**

At one (1) year of applicable experience in performing tests on systems components to determine operability, trouble-shooting, making required repairs, and installing and maintaining computer networks. Education requirement is Associate's degree or equivalent.

**Configuration Management Specialist:**

Must possess a minimum of 8 years of technical experience in the IT industry. Functional Responsibility: Responsible for creating, establishing, implementing and maintaining enterprise-wide Configuration Management Plan/Services and associated change management processes for tracking documentation, hardware and software configuration items. The CM specialist must coordinate the project CM processes and activities with other internal and external organizations. Support Engineering and Project Mgmt in planning, assessment, reporting and tracking activities, and in preparation of related presentations and reports. Coordinate and drive timely delivery of CM requirements and other inputs to the organizations implementing new design and CM tools for the engineering team. The CM Specialist is responsible for developing enterprise common service processes and procedures for identifying and maintaining all configuration items related to various systems life cycle projects. Minimum Education: Educational requirement is a bachelor's or Master's degree in a technical field (e.g., Computer Science, Engineering or IT-related field) or equivalent.

**Training Specialist Senior:**

Must possess a minimum of 8 years of experience in the field or in a related area. Designs and conducts company training programs. Monitors and reports the effectiveness of training on employees during the orientation period and for career development. Involved in initial plan design and existing plan enhancements. Familiar with a variety of the field's concepts, practices, and procedures. Relies on extensive experience and judgment to plan and accomplish goals. Performs a variety of tasks. May lead and direct the work of others. A wide degree of creativity and latitude is expected. Educational requirement is a bachelor's degree in a related area or equivalent.

**Documentation Specialist:**

Must possess a minimum of 0-2 years of experience in the field or in a related area. Prepares and/or maintains documentation pertaining to programming, systems operation and user documentation. Translates business specifications into user documentation. Plans, writes, and maintains systems and user support documentation efforts, including online help screen. Requires an associate's degree in a related area and 0-2 years of experience in the field or in a related area. Has knowledge of commonly-used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Works under immediate supervision. Primary job functions do not typically require exercising independent judgment. Educational requirement is an associate's degree in a related area or equivalent

**Support Center Analyst III\*:**

Must possess a minimum of ten years of experience providing general business systems support, including at least one year of specific experience working in a help desk environment identifying and resolving equipment and/or software-reported problems. Proficiency gained from specialized training in assigned help desk topic is highly desirable. Functional Responsibility: Responds to telephone and e-mail problem reports by working to identify and duplicate hardware and/or software-related problems. Performs fault tree analysis by determining symptomatic responses to eliminate unavailing or dysfunctional circumstances and focusing on isolating the probable cause. Requires experience in customer service, using Trouble Management System (TMS) or Remedy for ticket tracking, Topaz, Patrol and/or other error monitoring and tracking tools. Proficiency in providing job scheduling using Control M or other automated scheduler. Educational requirement is a High school diploma and technical proficiency training in assigned help desk topic or equivalent. Requires a HDI certification.

\*Category must be purchased in conjunction with a professional labor category, and can not be sold separately.

**Systems Analyst:**

Must possess a minimum of 4-6 years relevant experience. Functional Responsibility: Experience: Analyzes, evaluates and modifies existing or proposed systems and related devices. Coordinates with users to ensure timely and efficient manufacturer's software release installation. May design, encode, test and debug programs or user defined modifications. Educational requirement is a Bachelor's degree or equivalent.



**Support Center Analyst II\*:**

Must possess a minimum of six years of experience providing general business systems support, including at least one year of specific experience working in a help desk environment identifying and resolving equipment and/or software-reported problems. Proficiency gained from specialized training in assigned help desk topic is highly desirable.

Functional Responsibility: Responds to telephone and e-mail problem reports by working to identify and duplicate hardware and/or software-related problems. Performs fault tree analysis by determining symptomatic responses to eliminate unavailing or dysfunctional circumstances and focusing on isolating the probable cause. Requires experience in customer service, using Trouble Management System (TMS) or Remedy for ticket tracking, Topaz, Patrol and/or other error monitoring and tracking tools. Proficiency in providing job scheduling using Control M or other automated scheduler. Educational requirement is a High school diploma and technical proficiency training in assigned help desk topic or equivalent. Requires a HDI certification.

\*Category must be purchased in conjunction with a professional labor category, and can not be sold separately.

**Help Desk III\*:**

Must possess a minimum of ten years of experience providing general business systems support, including at least one year of specific experience working in a help desk environment identifying and resolving equipment and/or software-reported problems. Proficiency gained from specialized training in assigned help desk topic is highly desirable.

Functional Responsibility: Responds to telephone and e-mail problem reports by working to identify and duplicate hardware and/or software-related problems. Performs fault tree analysis by determining symptomatic responses to eliminate unavailing or dysfunctional circumstances and focusing on isolating the probable cause. As necessary, coordinates problem identification with programmers, analysts, software engineers, and/or trainers to develop and offer responsive solutions to allow continued functionality. Educational requirement is a High school diploma and technical proficiency training in assigned help desk topic or equivalent.

\*Category must be purchased in conjunction with a professional labor category, and can not be sold separately.

**Help Desk II\*:**

Must possess a minimum of six years of experience providing general business systems support, including at least one year of specific experience working in a help desk environment identifying and resolving equipment and/or software-reported problems. Proficiency gained from specialized training in assigned help desk topic is highly desirable.

Functional Responsibility: Responds to telephone and e-mail problem reports by working to identify and duplicate hardware and/or software-related problems. Performs fault tree analysis by determining symptomatic responses to eliminate unavailing or dysfunctional circumstances and focusing on isolating the probable cause. As necessary, coordinates problem identification with programmers, analysts, software engineers, and/or trainers to develop and offer responsive solutions to allow continued functionality. Educational requirement is a High school diploma and technical proficiency training in assigned help desk topic or equivalent..

\*Category must be purchased in conjunction with a professional labor category, and can not be sold separately.

**Help Desk I\*:**

Must possess a minimum of two years of experience providing general business systems support, including at least one year of specific experience working in a help desk environment identifying and resolving equipment and/or software-reported problems. Proficiency gained from specialized training in assigned help desk topic is highly desirable. Functional Responsibility: Responds to telephone and e-mail problem reports by working to identify and duplicate hardware and/or software-related problems. Performs fault tree analysis by determining symptomatic responses to eliminate unavailing or dysfunctional circumstances and focusing on isolating the probable cause. As necessary, coordinates problem identification with programmers, analysts, software engineers, and/or trainers to develop and offer responsive solutions to allow continued functionality. Educational requirement is a High school diploma and technical proficiency training in assigned help desk topic or equivalent.

\*Category must be purchased in conjunction with a professional labor category, and can not be sold separately.

**Support Specialist III:**

Must possess a minimum of 8 years experience. Demonstrated supervisory skills in managing technical and/or program support projects or demonstrated independence in execution of such projects. Progressive experience and independence executing in company or program support areas such as quality assurance, configuration management, technical publications and material handling and/or assembly is necessary. Establishes and maintains processes for evaluating and controlling software/hardware/documentation throughout the product life cycle. Ability to make use of automated tools and processes in support of any of the following IT disciplines: software engineering, database management, digital signal processing, system administration, or other related IT activity is required. Educational requirement is an associate degree or equivalent.

**Support Center Analyst I\*:**

Must possess a minimum of two years of experience providing general business systems support, including at least one year of specific experience working in a help desk environment identifying and resolving equipment and/or software-reported problems. Proficiency gained from specialized training in assigned help desk topic is highly desirable. Functional Responsibility: Responds to telephone problem reports by working to identify and duplicate hardware and/or software-related problems. Performs fault tree analysis by determining symptomatic responses to eliminate unavailing or dysfunctional circumstances and focusing on isolating the probable cause. Requires experience in customer service, using Trouble Management System (TMS) or Remedy for ticket tracking, Topaz, Patrol and/or other error monitoring and tracking tools. Proficiency in providing job scheduling using Control M or other automated scheduler. Educational requirement is a High school diploma and technical proficiency training in assigned help desk topic or equivalent. Requires a HDI certification.

\*Category must be purchased in conjunction with a professional labor category, and can not be sold separately.

**Support Specialist II:**

Must possess a minimum of five years experience in the field of information systems and three years specialized network administration or support experience. Duties may include user support and troubleshooting of hardware, software, and printer problems; system administration of networked systems; and end user support and training. Relevant experience includes, but is not limited to, knowledge of network and/or PC operating systems, applications, and network components. Educational requirement is an associate degree or equivalent.

**Support Specialist:**

Must possess a minimum of 1-2 years related experience, or equivalent. Analyzes, plans, designs, and installs new personal computer systems and reviews, monitors and upgrades existing personal computer systems. Determines user specifications for hardware and software. Purchases or builds software to meet user needs. Installs new, and maintains existing hardware and software. Typically reports to LAN/WAN Manager or PC Support Manager. Educational requirement is an associate degree or equivalent.

**Systems Engineer 1**

Analyzes functional business requirements and design specifications for functional activities. Should provide identification/fixing for the problems within existing systems design/implementation of new systems, enhances the existing systems and participates in analysis, design and new construction of next generation IT systems. Responsible for understanding the needs of the customers and the realities of commercially available IT products, and creating requirements that will allow implementation by the architecture and engineering team and COTs products. Must possess experience of system engineering in one or more areas including telecommunications concepts, computer languages, operating systems, database/DBMS and middleware. May require a bachelor's degree in engineering and 0-2 years of experience in the field or in a related area.

### **Systems Engineer 2**

Analyzes functional business requirements and design specifications for functional activities. Provides identification/fixing for the problems within existing systems design/implementation of new systems, enhances the existing systems and participates in analysis, design and new construction of next generation IT systems. Responsible for understanding the needs of the customers and the realities of commercially available IT products and for creating requirements that will allow implementation by the architecture and engineering team and COTS products. Bachelors Degree from an accredited college or university with five years of related experience. Equivalent: High School diploma with nine years of specialized experience in related field, or Associates Degree with seven years of experience, or Masters Degree with three years experience, or Doctorate Degree with one year experience.

### **Systems Engineer 3**

Provides identification/fixing of problems within existing systems, design/implementation of new systems and enhancement of existing systems. Participates in analysis, design and new construction of next generation IT systems. Responsible for understanding the needs of the customers and the realities of commercially available IT products, and creating requirements that will allow implementation by the development team. Experience as a systems engineer on one or more IT platforms is preferred. Must have solid technical background with a focus on IT systems. Requires a bachelor's degree in engineering and 6-8 years of experience in the field or in a related area.

### **Systems Engineer 5**

Provides identification/fixing of problems within existing systems, design/implementation of new systems and enhancement of existing systems. Participates in analysis, design and new construction of next generation IT systems. Responsible for understanding the needs of the customers and the realities of commercially available IT products, and creating requirements that will allow implementation by the development team. Experience as a systems engineer on one or more IT platforms is preferred. Must have solid technical background with a focus on IT systems. Skill areas include telecommunications (ex. – TCP/IP, OIS/CMIP/X25), operating systems (ex. – Windows, NT, UNIX), database/DBME (ex. – Oracle, Access, Sybase) and applications (ex. – Tivoli, Peoplesoft, etc.) are required. Familiarity with ITIL, SEI/CMM desirable. Demonstrated knowledge of Visio, DoDAF, Telelogic/Popkin System Architect, DOORS, demonstrated 2 years experience with DOD 5000 is desired. Requires a bachelor's degree in engineering and at least 12 years of experience in the field or in a related area

### **Engineer 2**

Responsible for design, development, implementation, and analysis of technical products and systems. Performs engineering design evaluations. May develop a range of products. Recommends alterations to development and design to improve quality of products and/or procedures. Requires a bachelor's degree in engineering and 1-4 years of experience in the field or in a related area. Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. Performs a variety of tasks. Works under general supervision. Typically reports to a supervisor or manager.

### **Training Analyst**

Designs and conducts company training programs. Monitors and reports the effectiveness of training on employees during the orientation period and for career development. May be involved in initial plan design and existing plan enhancements. Requires a bachelor's degree in a related area and 0-3 years of experience in the field or in a related area. Has knowledge of commonly-used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Works under immediate supervision. Primary job functions do not typically require exercising independent judgment. Typically reports to a manager.

**Database Administrator 1**

Assists in administering database organizations, standards, controls, procedures, and documentation. Provides entry level technical consulting in the definition, design, and creation of a data base environment. Develops applications to help formulate data-based solutions to business problems, data architectures, data base management system facilities and capabilities, and the operation and tuning of data bases. Maintains databases with respect to access methods, access time, batch processes, device allocation, validation checks, organization, protection and security, documentation, and statistical methods. Includes maintenance of database dictionaries, and integration of systems through database design. Maintains database dictionaries. Maintains and documents JCL, shell scripts and batch processes. Ensures that documentation is complete and up-to-date. Applies procedures for periodic database backup. A Bachelor degree or equivalent experience and zero to two years of related experience required.

**Database Administrator 2**

Administers database organizations, standards, controls, procedures, and documentation. Provides technical consulting in the definition, design, and creation of a database environment. Assists applications development staff and users with database solutions to business problems, data architectures, database management system facilities and capabilities, and the operation and tuning of databases. Implements and maintains databases with respect to access methods, access time, batch processes, device allocation, validation checks, organization, protection and security, documentation, and statistical methods. Includes maintenance of database dictionaries and integration of systems through database design. Maintains expertise in use of automated tools for database design and implementation. Maintains and documents shell scripts and batch processes. Ensures that documentation is complete and up-to-date. Develops and applies procedures for periodic database backup. . Requires two to four years experience and a Bachelors Degree in Computer Science or a related technical field and related experience.

**Database Administrator 3**

Defines and administers database organizations, standards, controls, procedures, and documentation. Provides experienced technical consulting in the definition, design, and creation of a database environment. Advises applications development staff and users on database solutions to business problems, data architectures, database management system facilities and capabilities, and the operation and tuning of databases. Ensures economic and efficient availability of data within adequate safeguards. Designs, implements, and maintains databases with respect to access methods, access time, batch processes, device allocation, validation checks, organization, protection and security, documentation, and statistical methods. Includes maintenance of database dictionaries, and integration of systems through database design. Develops and maintains expertise in use of automated tools for database design and implementation. . Requires five to seven years' experience and a Bachelors Degree in Computer Science or a related technical field and related experience.

**Database Administrator 4**

Understands and practices a wider range of data administration skills, often in a Business Process Reengineering context. Participates in strategic data planning, including development and implementation of DA policies, standards, and procedures. Is able to lead and train junior DA specialists. Understands data from the perspective of data processing and in the context of different life-cycle phases. Activities may include data quality engineering, metadata consolidation and integration, metamodel development and maintenance, repository management, data warehouse design and data mining, data security administration, and formulation of enterprise-specific data metrics. Requires eight to ten years' experience and a Bachelors Degree in Computer Science or a related technical field and related experience.

**IT Security Specialist 1**

Establishes and satisfies system-wide information security requirements based upon the analysis of user, policy, regulatory, and resource demands. Provides leadership and guidance in the development, design, and application of solutions implemented by more junior staff members. Coordinates with senior representatives within the customer organizations to address program goals, milestones, resources, and risks. Supports common user information systems, as well as dedicated special purpose systems requiring specialized security features and procedures. Associates Degree with two years of related experience. Equivalents: High School diploma with four years of specialized experience in related field, or Bachelors or Masters Degree with no experience.

#### **IT Security Specialist 4**

Must possess a minimum of 10-15 years experience. Certification and Accreditation Certification Officers (CACOs) advise and assist the Sponsor's customers with the Lifecycle Certification and Accreditation (C&A) process and developing a Systems Security Plan (SSP). Acts as C&A project register, managing the C&A process. Develop risk assessment reports: Based on review of SSP and interviews with developer/customer, assess systems against Intelligence Community Information Assurance policies and regulations, analyze risk, recommend mitigating countermeasures, and write short, succinct risk assessment and certification reports for submission to the Chief Information Officer and Executive Director. Assemble and submit C&A packages to Principal Accreditation Authority/Designated Accreditation Authority. Educational requirement is a BS/BA degree or equivalent.

#### **Jr Test Engineer**

Performs relatively routine tasks related to the testing of raw materials, manufactured products or manufacturing processes. Writes test procedures. Investigates and analyzes test failures. Reviews and evaluates in-process rejections and trends, recommending corrective action as appropriate. Designs test procedures. Provides assistance in the areas of productivity, manufacturing processing, equipment and process improvement. Requires Bachelor's degree or equivalent, and zero to two years of related experience.

#### **Principal Network Engineer**

the candidate will design and implement projects that cross the Network Operations and Computer Net Defense domains, and may have to design and configure test configurations on a variety of networking devices, servers, firewalls, IDS/IPS, SAN, and VPN products and associated software components. The candidate may have to rapidly gain knowledge on new technologies and tools, (e.g. the CloudShield security appliance and packet programming tool). This position requires strong communications skills, including ability to create and maintain presentation and documentation materials and occasional demonstrations to internal and external stakeholders. Required Knowledge/Skills Comprehensive understanding of systems development lifecycle, network operations, network management, network Defense, systems troubleshooting, NIST IA certification and accreditation process and tools, systems or systems analysis, Windows and Linux Systems Administration, VMware configuration and operations, scripting languages, server virtualization, systems development lifecycle and systems engineering role throughout lifecycle. Detailed knowledge in IBM Netcool, ArcSight, and CloudShield products is strongly desired. Must support the ESIIIL PMO to remediate security findings. Detailed knowledge of one or more of the systems engineering competencies listed above under Scope. Able to handle seldom and unusually occurring job events within the competency areas of detailed knowledge. Ability to manage IT environment within an ITIL v3 framework; especially configuration and change management principles. Minimum 10 years systems-level experience in the Network Operations/Management and Network Defense domains. Possession of a Bachelor's degree from an accredited college/university or addition of 5 years to overall experience requirement.

#### **Senior Network Engineer**

Provides support for technical direction and engineering expertise for communications (LAN/MAN/WAN) systems infrastructure activities, including network planning, designing, and implementing communications infrastructure requirements for buildings and systems. Ensures that adequate and appropriate planning is provided to direct building architects and planners in building communications spaces, networks, and media pathways to meet industry standards. Interfaces with internal and external customers and vendors to determine communications infrastructure needs. Bachelors Degree from an accredited college or university with five years of related experience. Equivalents: High School diploma with nine years of specialized experience in related field, or Associates Degree with seven years of experience, or Masters Degree with three years experience, or Doctorate Degree with one year experience.

**Network Engineer**

Evaluates communication hardware and software, troubleshoots LAN/MAN/WAN and other network related problems, and provides technical expertise for performance and configuration of networks. Performs general LAN/MAN/WAN administration, provides technical leadership in the integration and testing of complex, large scale computer integrated networks. Schedules conversions and cutovers. Oversees network control center. Supervises maintenance of systems. Coordinates with all responsible users and sites. Supervises staff. Bachelors Degree from an accredited college or university with five years of related experience. Equivalents: High School diploma with nine years of specialized experience in related field, or Associates Degree with seven years of experience, or Masters Degree with three years experience, or Doctorate Degree with one year experience.

**Junior Network Engineer**

Analyzes network characteristics (e.g., traffic, connect time, transmission speeds, packet sizes, and throughput) and recommends procurement, removals, and modifications to network components. Designs and optimizes network topologies and site configurations. Plans installations, transitions, and cutovers of network components and capabilities. Coordinates requirements with users and suppliers. Associates Degree with two years of related experience. Equivalents: High School diploma with four years of specialized experience in related field, or Bachelors or Masters Degree with no experience.

**Inventory Control Specialist**

The Inventory Control Specialist is responsible for maintaining current records for property within his/her assigned custodial area. The Inventory Control Specialist ensures complete and accurate data entry into approved inventory control systems including Sunflower Asset Management System (SAMS), and provides federal contacts with reports of surveys (ROS) as required. The Inventory Control Specialist assists with all equipment refreshes, supporting the packaging and shipping of equipment and preparing equipment for return or disposal. The Inventory Control Specialist responds to adverse incidents of loss or theft of property, creating and maintaining appropriate documentation and reports.

**Financial Manager**

Responsible for developing budgets, tracking costs, and securing funding for the ESO. The Financial Manager is responsible for gathering, storing, and tracking all financial activities for projects and on-going operations including: Project Cost Benefits Analyses, Organization and project budgets, Agency specific costs for services, Review of actual charges and analysis of spending patterns from providers, and, Preparation of periodic and special financial reports. A BS degree in business or accounting is required. The manager requires 6 years of appropriate experience.

**IT Consultant Senior**

Manages the project work as defined by the client contract. Leads medium to large complex IT projects and major phases of very large projects. Manages the fact finding, analysis, and development of hypothesis/ conclusions, production of final reports and delivery of presentations. Responsible for ensuring that the project delivers to client expectations on time and to budget. Has expert knowledge of practice, consulting group, and matrix organization operations and business objectives. Has in-depth knowledge of market/industry and service line. Masters Degree or higher with over six years of related experience. Equivalents: Bachelors Degree from an accredited college or university with eight years experience, or Doctorate Degree with four years experience.

**Enterprise Architect**

Establishes system information requirements using analysis from the information engineer(s) in the development of enterprise-wide or large scale information systems. Designs architecture to include the software, hardware, and communications to support the total requirements, as well as provide for present and future cross-functional requirements and interfaces. As appropriate, ensures these systems are compatible and in compliance with the standards for open systems architectures; the Open Systems Interconnection (OSI) and International Standards Organization (ISO) reference models; and profiles of standards — such as Institute of Electrical and Electronic Engineers, Open Systems Environment, reference model — as they apply to the implementation and specification of Information Management solution of the application platform across the application program interface and external environment/software Masters Degree or higher with over four years of related experience. Equivalents: Bachelors Degree from an accredited college or university with eight years experience, or Doctorate Degree with two years experience.

**Senior Enterprise Architect**

Establishes system information requirements using analysis from the information engineer(s) in the development of enterprise-wide or large scale information systems. Designs architecture to include the software, hardware, and communications to support the total requirements, as well as provide for present and future cross-functional requirements and interfaces. As appropriate, ensures these systems are compatible and in compliance with the standards for open systems architectures; the Open Systems Interconnection (OSI) and International Standards Organization (ISO) reference models; and profiles of standards — such as Institute of Electrical and Electronic Engineers, Open Systems Environment, reference model — as they apply to the implementation and specification of Information Management solution of the application platform across the application program interface and external environment/software Masters Degree or higher with over six years of related experience. Equivalents: Bachelors Degree from an accredited college or university with twelve years experience, or Doctorate Degree with four years experience.

**KNIGHT POINT'S  
AUTHORIZED GSA SCHEDULE CONTRACT PRICING  
SERVICES**

<b>SIN</b>	<b>Product Number</b>	<b>GSA Price</b>
132-51	Subject Matter Expert	\$328.42
132-51	Business Process Consultant	\$195.03
132-51	Sr. Applications Consultant (Enterprise Systems Certified)	\$189.48
132-51	Data Migration III	\$188.74
132-51	Program Manager III	\$168.61
132-51	Subject Matter Expert II	\$164.60
132-51	Applications Consultant (Enterprise Systems Certified)	\$157.90
132-51	Data Migration II	\$157.28
132-51	Relocation Analyst III	\$152.92
132-51	Database Architect Principal	\$150.53
132-51	VOIP Consultant	\$146.80
132-51	Relocation Analyst II	\$128.59
132-51	Project Manager	\$114.78
132-51	Data Architect	\$105.26
132-51	Security C&A	\$96.90
132-51	RF Engineer	\$85.99
132-51	Disaster Recovery Specialist I	\$85.50
132-51	UNIX Relocation Analyst II	\$83.88
132-51	Technician III	\$73.68
132-51	Configuration Management Specialist	\$73.04
132-51	Relocation Analyst/Help Desk Specialist	\$72.51
132-51	Technician II	\$70.00
132-51	Configuration Management Specialist	\$65.98
132-51	Training Specialist Senior	\$65.62
132-51	Documentation Specialist	\$59.91
132-51	Support Center Analyst III	\$57.64
132-51	Systems Analyst	\$55.59
132-51	Support Center Analyst II	\$51.96
132-51	Help Desk III	\$50.65
132-51	Help Desk II	\$46.77
132-51	Help Desk I	\$42.86
132-51	Support Specialist III	\$40.44
132-51	Support Center Analyst I	\$40.01
132-51	Support Specialist II	\$38.61
132-51	Support Specialist	\$35.55
132-51	Systems Engineer 1	\$73.36
132-51	Systems Engineer 2	\$98.48
132-51	Systems Engineer 3	\$114.74



<b>SIN</b>	<b>Product Number</b>	<b>GSA Price</b>
132-51	Systems Engineer 5	\$195.09
132-51	Engineer 2	\$84.60
132-51	Training Analyst	\$49.55
132-51	Database Administrator 1	\$79.00
132-51	Database Administrator 2	\$80.65
132-51	Database Administrator 3	\$102.16
132-51	Database Administrator 4	\$117.49
132-51	IT Security Specialist 1	\$68.68
132-51	IT Security Specialist 4	\$125.64
132-51	Jr Test Engineer	\$80.28
132-51	Principal Network Engineer	\$149.38
132-51	Senior Network Engineer	\$125.64
132-51	Network Engineer	\$93.02
132-51	Junior Network Engineer	\$59.32
132-51	Inventory Control Specialist	\$78.03
132-51	Financial Manager	\$110.36
132-51	IT Consultant Senior	\$121.04
132-51	Enterprise Architect	\$161.44
132-51	Senior Enterprise Architect	\$201.74

## ***COMMUNICATIONS AS A SERVICE OFFERINGS***

### **CLIN 0001 CATEGORY 1 SWITCHES CONUS**

Category 1 of this contract focuses on network switch technology and the features required in a datacenter. The modules listed in SLINs 0001BA-0001BJ should be priced on a per module basis.

#### ***SLIN 0001AA-0001AC CATEGORY 1 SWITCHES***

##### **Tier 1a (Small)**

This tier is the lowest category of switch used on this contract. This type of switch would be classified as an access layer switch used for layer 2 connectivity in the data center. This switch needs to support the data center class requirements but remain cost effective enough to be deployed on a larger scale. Features typically found in this class of switch would be: port channeling, modular expansion for uplinks, port security, layer 2 access control, dual redundant power supplies, multicast, and port mirroring.

Size: 1 Gbps Port

#### ***SLIN 0001AD-0001AF CATEGORY 1 SWITCHES***

##### **Tier 1b (Small)**

This tier is the lowest category of switch used on this contract. This type of switch would be classified as an access layer switch used for layer 2 connectivity in the data center capable of 10Gbps. This switch needs to support the data center class requirements but remain cost effective enough to be deployed on a larger scale. Features typically found in this class of switch would be: port channeling, modular expansion for uplinks, port security, layer 2 access control, dual redundant power supplies, multicast, and port mirroring.

Size: 1 Gbps and 10 Gbps Port

#### ***SLIN 0001AG-0001AJ CATEGORY 1 SWITCHES***

##### **Tier 2a (Medium)**

This tier encompasses the switch models that meet the typical data center class layer 2 switching requirements found in the aggregation layer. This category contains the features found in the tier 1 class switches as well as some of the features found in the tier 3. This type of switch has the ability to switch network traffic at a high rate of speed, provide redundant configurations, and remain scalable. Features typically found in this class of switch would be: Port channeling, hot

swappable modules, multicast, port mirroring, dual redundant power supplies, port security, and IPv6.

Size: 1 Gbps Port

### ***SLIN 000IAK-000IAM CATEGORY 1 SWITCHES***

#### **Tier 2b (Medium)**

This tier encompasses the switch models that meet the typical data center class layer 2 switching requirements found in the aggregation layer capable of 10 Gbps. This category contains the features found in the tier 1 class switches as well as some of the features found in the tier 3. This type of switch has the ability to switch network traffic at a high rate of speed, provide redundant configurations, and remain scalable. Features typically found in this class of switch would be: Port channeling, hot swappable modules, multicast, port mirroring, dual redundant power supplies, port security, and IPv6.

Size: 1 Gbps and 10 Gbps Port

### ***SLIN 000IAN-000IQ CATEGORY 1 SWITCHES***

#### **Tier 3a (Large)**

This tier encompasses the higher end switches that would typically be found in a Data Center, Enterprise, or Core device classes. These devices are not only capable of supporting greater throughput and meeting higher density port requirements but also have the features and options of supporting the latest technologies found in an enterprise class network. This type of switch will need to support high availability, operational simplicity, and have the scalability to meet the requirements of a cutting edge IT switch. Features typically found in this class of switch would be: Port channeling, VLAN management, high throughput, hot swappable modules, hardware acceleration, dual redundant power supplies, IPv6 Quality of Service (QOS), and virtualization.

Size: 1 Gbps Port

### ***SLIN 000IAR-000IAT CATEGORY 1 SWITCHES***

#### **Tier 3b (Large)**

This tier encompasses the higher end switches that would typically be found in a Data Center, Enterprise, or Core device classes capable of 10 Gbps. These devices are not only capable of supporting greater throughput and meeting higher density port requirements but also have the features and options of supporting the latest technologies found in an enterprise class network. This type of switch will need to support high availability, operational simplicity, and have the scalability to meet the requirements of a cutting edge IT switch. Features typically found in this class of switch would be: Port channeling, VLAN management, high throughput, hot swappable modules, hardware acceleration, dual redundant power supplies, IPv6 Quality of Service (QOS), and virtualization.

Size: 1 Gbps and 10 Gbps Port

## ***SLIN 0001BA - 0001BJ CATEGORY 1 TIER 3 SWITCHES – SERVICE MODULES***

### **Application Control Engine (ACE Module)**

The ACE module provides a broad set of intelligent Layer 4 load-balancing and Layer 7 content-switching technologies that support increased availability, acceleration, and security for data center applications. Data center server efficiency is greatly improved through highly flexible application traffic management, offloading of CPU intensive tasks such as SSL acceleration, and TCP session management. Data center security is enhanced through deep packet inspection and blocks of malicious attacks.

### **Content Switching Module (CSM)**

A content Switching Module provides a high-performance load-balancing solution for large enterprise and Internet Service Provider networks. The CSM supports a wide range of IP Protocols (Layer 2 through 7), Load-Balancing Algorithms, URL and Cookie-Based Load Balancing, High Availability, Connection Redundancy, and User Session Persistence. Geographical load-balancing environments can also be supported through DNS and Global Server Load Balancing services. High Performance Distributed Denial of Service (DDoS) Protection and Firewall Load Balancing can be utilized to increase Data center security.

### **Content Switching Module with Secure Sockets Layer (CSM-S)**

A Content Switching Module with Secure Sockets Layer (SSL) functionality provides advanced Layer 4 – 7 content switching and load balancing capabilities. The added SSL acceleration functionality reduces load on servers by offloading the CPU intensive task of encrypting/decrypting SSL transactions. The CSM-S supports a wide range of IP Protocols (Layer 2 through 7), Load-Balancing Algorithms, URL and Cookie-Based Load Balancing, High Availability, Connection Redundancy, and User Session Persistence. Geographical load-balancing environments can also be supported through DNS and Global Server Load Balancing services. High Performance Distributed Denial of Service (DDoS) Protection and Firewall Load Balancing can be utilized to increase Data center security.

### **Firewall Services Module (FSWM)**

The FSWM is a high-speed, integrated firewall module for the Cisco Catalyst 6500 series switch. The FSWM allows any port on the 6500 switch to operate as a firewall port and integrates firewall security inside the network infrastructure. The FSWM provides for integrated stateful inspection with application and protocol inspection engines that examine network flows at Layers 4-7.

## **Intrusion Detection System Module (IDSM-2)**

The Cisco IDSM-2 protects switched environments by integrating full-featured Intrusion Prevention System (IPS) functions directly into the network infrastructure through the widely deployed Cisco Catalyst chassis. This integration allows the user to monitor traffic directly off the switch backplane—a logical platform for additional services such as firewall, VPN, and IPS. Detailed inspection of Layer 2-7 traffic protects the network from policy violations, vulnerability exploitations, and anomalous activity.

## **IPSec VPN Shared Port Adapter (VPN SPA)**

The IPSec VPN SPA delivers scalable VPN performance for Cisco Catalyst 6500 Series Switches and provides VPN hardware acceleration for both IPSec and generic routing encapsulation (GRE), comprehensive support of site-to-site IPSec, remote-access IPSec, and certificate authority/public key infrastructure (CA/PKI). The supporting IOS Software supports secure, reliable transport of virtually any type of network traffic, including multiprotocol, multicast, and IP telephony across the IPSec VPN. Diverse Networks are supported via Dynamic Multipoint VPNs (DMVPNs) for meshed and hierarchical network topologies.

## **Network Analysis Module (NAM-2)**

This module provides for powerful network management to manage complex campus, data center, and WAN edge environments. Efficiency and manageability are simplified by granular traffic analysis, comprehensive application performance metrics, voice analytics, and deep packet captures. The module also provides for historical analysis utilizing an embedded performance database.

## **Enhanced FlexWAN Module**

The Enhanced FlexWAN module provides multiprotocol routing support with full Internet route connectivity for speeds ranging from serial RS-232 to OC-3. Enhanced FlexWAN modules can accept up to two Cisco 7200/7500 WAN port adapters, which deliver WAN consolidation and extend quality of service (QoS) and traffic management capabilities over WAN segments. The Enhanced FlexWAN modules support ATM and POS OC-3 links and channelized, clear-channel port adapters at speeds from DS0 to T3/E3. The Enhanced FlexWAN module also provides connectivity to the crossbar fabric and enhancements in processor speed and onboard memory.

## **Wan Module - Shared Port Adapter Interface Processor (SIP) Module**

The modular port adapter and programmable interface processor supports up to 10 Gbps of bandwidth, a wide range of interfaces, and provides the unique ability to combine both Layer 2 and Layer 3 services on the same line card.

## **CLIN 0002 CATEGORY 2 ROUTERS CONUS**

Routers are specialized hardware-based network communications devices that interconnect two or more computer networks and selectively interchange packets of data between them. The modules listed in SLINs 0002BA-0002BC, 0002BH should be priced on a per module basis.

### ***SLIN 0002AA-0002AC, 0002AV, 0002AY CATEGORY 2 ROUTERS***

#### **Tier 1a (Small): 4 Gbps or less of aggregate data passed through the device**

A small router is typically optimized for lower performance needs, such as use within a branch or small office setting. Features of routers in this tier include the routing of multiple communications protocols, including IPv4 and IPv6, using open-standards based routing protocols such as OSPF and BGP, and provide packet filtering capabilities using access-control lists. Minimal scalability through additional line cards to allow for interface expansion. Redundancy of power input is common in this tier of router. Routers in this tier typically pass 4 Gbps or less of aggregate data through the device when averaged across a 30 day period.

Size: 1 Gbps Port

### ***SLIN 0002AD-0002AF CATEGORY 2 ROUTERS***

#### **Tier 1b (Small): 4 Gbps or less of aggregate data passed through the device**

A small router is typically optimized for lower performance needs, such as use within a branch or small office setting. Features of routers in this tier include the routing of multiple communications protocols, including IPv4 and IPv6, using open-standards based routing protocols such as OSPF and BGP, and provide packet filtering capabilities using access-control lists. Minimal scalability through additional line cards to allow for interface expansion. Redundancy of power input is common in this tier of router. Routers in this tier typically pass 4 Gbps or less of aggregate data through the device when averaged across a 30 day period.

Size: 10 Gbps Port

***SLIN 0002AG-0002AJ, 0002AW, 0002AZ CATEGORY 2 ROUTERS***

**Tier 2a (Medium): 100 Gbps or less of aggregate data passed through the device**

A router in the medium tier is typically optimized for performance needs, such as use within a medium to large office setting. Features of routers in this tier include the routing of multiple communications protocols, including IPv4, IPv6 and MPLS, using open-standards based routing protocols such as OSPF and BGP, packet filtering capabilities using access-control lists, quality of service tagging, hardware encryption and 10 Gbps interface availability. Medium tier devices typically exhibit significant scalability to allow for new capabilities and interface expansion through the installation of additional line cards and modules. Redundancy of hardware through the installation of secondary line cards and redundant power supplies are common in this tier of routers. Routers in this tier typically pass 100 Gbps or less of aggregate data through the device when averaged across a 30 day period.

Size: 1 Gbps Port

***SLIN 0002AK-0002AM CATEGORY 2 ROUTERS***

**Tier 2b (Medium): 100 Gbps or less of aggregate data passed through the device**

A router in the medium tier is typically optimized for performance needs, such as use within a medium to large office setting. Features of routers in this tier include the routing of multiple communications protocols, including IPv4, IPv6 and MPLS, using open-standards based routing protocols such as OSPF and BGP, packet filtering capabilities using access-control lists, quality of service tagging, hardware encryption and 10 Gbps interface availability. Medium tier devices typically exhibit significant scalability to allow for new capabilities and interface expansion through the installation of additional line cards and modules. Redundancy of hardware through the installation of secondary line cards and redundant power supplies are common in this tier of routers. Routers in this tier typically pass 100 Gbps or less of aggregate data through the device when averaged across a 30 day period.

Size: 10 Gbps Port

***SLIN 0002AN-0002AQ, 0002AX, 0002CA CATEGORY 2 ROUTERS***

**Tier 3a (Large): 2 Tbps or less of aggregate data passed through the device**

A router in the large tier is typically optimized for performance needs, such as use within a medium to large office setting. Features of routers in this tier include the routing of multiple communications protocols, including IPv4, IPv6 and MPLS, using open-standards based routing protocols such as OSPF and BGP, packet filtering capabilities using access-control lists, quality of service tagging, hardware encryption and multiple 10 Gbps interface availability. Large tier devices typically exhibit robust scalability to allow for new capabilities and interface expansion through the installation of additional line cards and modules. Redundancy of hardware through the installation of secondary line cards and redundant power supplies are common in this tier of routers. Routers in this tier typically pass 2 Tbps or less of aggregate data through the device when averaged across a 30 day period.

Size: 1 Gbps Port

***SLIN 0002AR-0002AT CATEGORY 2 ROUTERS***

**Tier 3b (Large): 2 Tbps or less of aggregate data passed through the device**

A router in the large tier is typically optimized for performance needs, such as use within a medium to large office setting. Features of routers in this tier include the routing of multiple communications protocols, including IPv4, IPv6 and MPLS, using open-standards based routing protocols such as OSPF and BGP, packet filtering capabilities using access-control lists, quality of service tagging, hardware encryption and multiple 10 Gbps interface availability. Large tier devices typically exhibit robust scalability to allow for new capabilities and interface expansion through the installation of additional line cards and modules. Redundancy of hardware through the installation of secondary line cards and redundant power supplies are common in this tier of routers. Routers in this tier typically pass 2 Tbps or less of aggregate data through the device when averaged across a 30 day period.

Size: 10 Gbps Port



## **CATEGORY 2 ROUTER SERVICE MODULES**

### ***SLIN 0002BD***

#### SONET Interface module - small

A synchronous optical network (SONET) is transport oriented, protocol neutral transport method. It can run over a range of bandwidths. SONET may carry ATM, Ethernet, and other circuit oriented protocols over fiber optic media. When used to carry Ethernet frames, it is referred to as "packet over SONET", or POS. SONET connections are usually made directly to a communications device such as a switch or router.

SONET interface modules may be installed into hardware already deployed to the field. Modules come in various speeds. Varying bandwidth does not change SONET. It only changes the capacity of the transport.

Performance: OC-3 (155 megabits per second)

### ***SLIN 0002BE***

#### SONET Interface module - medium

A synchronous optical network (SONET) is transport oriented, protocol neutral transport method. It can run over a range of bandwidths. SONET may carry ATM, Ethernet, and other circuit oriented protocols over fiber optic media. When used to carry Ethernet frames, it is referred to as "packet over SONET", or POS. SONET connections are usually made directly to a communications device such as a switch or router.

SONET interface modules may be installed into hardware already deployed to the field. Modules come in various speeds. Varying bandwidth does not change SONET. It only changes the capacity of the transport.

Performance: OC-12 (622 megabits per second)

## ***SLIN 0002BF***

### SONET Interface module - large

A synchronous optical network (SONET) is transport oriented, protocol neutral transport method. It can run over a range of bandwidths. SONET may carry ATM, Ethernet, and other circuit oriented protocols over fiber optic media. When used to carry Ethernet frames, it is referred to as "packet over SONET", or POS. SONET connections are usually made directly to a communications device such as a switch or router.

SONET interface modules may be installed into hardware already deployed to the field. Modules come in various speeds. Varying bandwidth does not change SONET. It only changes the capacity of the transport.

Performance: OC-48 (2.5 gigabits per second)

## ***SLIN 0002BG***

### SONET Interface module - extra large

A synchronous optical network (SONET) is transport oriented, protocol neutral transport method. It can run over a range of bandwidths. SONET may carry ATM, Ethernet, and other circuit oriented protocols over fiber optic media. When used to carry Ethernet frames, it is referred to as "packet over SONET", or POS. SONET connections are usually made directly to a communications device such as a switch or router.

SONET interface modules may be installed into hardware already deployed to the field. Modules come in various speeds. Varying bandwidth does not change SONET. It only changes the capacity of the transport.

Performance: OC-192 (9.6 gigabits per second)

## **CLIN 0003 CATEGORY 3 APPLIANCES CONUS**

Application-level gateways are devices or specialized operating environments in a virtualized environment that provide protection to certain application-layer "control/data" protocols such as HTTP, HTTPS, DNS, XML and/or FTP, while commonly providing load balancing capabilities as well.

## ***SLIN 0003AA CATEGORY 3 APPLIANCES***

### **Tier 1 - Application-level gateway**

#### **Tier 1a (Small)**

Small application-level gateways provide basic application protection, caching and/or load balancing functionalities at the enclave level. These are typically deployed directly in front of the servers they are supporting. Features include basic caching, protocol acceleration, load balancing, and application-layer communications protection. SSL termination is typically not required at this tier. Automatic configuration synchronization between redundant pairs of devices is common at this level. Remote management, redundant power and traffic monitoring are common as well.

## ***SLIN 0003AB CATEGORY 3 APPLIANCES***

### **Tier 1 - Application-level gateway**

#### **Tier 1b (Large)**

The large tier of application-level gateways provides application protection and load balancing at datacenter, DMZ or global levels. Are typically deployed at the perimeter of the network and provide caching, protocol acceleration, load balancing and application-layer communications protection services to multiple workloads at one or more sites. SSL offload is often required at this level using FIPS 140-2 compliant equipment. Large tier application-level gateways often offer DNS components to allow for load balancing across multiple sites.

## ***SLIN 0003AC CATEGORY 3 APPLIANCES***

### **Tier 2 - Firewall**

A firewall is a software based application suite or hardware based network appliance designed to permit and/or deny access to a network, enclave or data center based upon configured rules. Basic features common to each proceeding tier are high availability, NAT/PAT, application layer filtering, stateful TCP and UDP connections and packet inspection, smart application protocol support (port redirection for FTP, SQLnet, RTSP, DNS, etc.), cost effective bandwidth capability, and cost effective simultaneous connection support.

#### **Tier 2a (Small)**

Firewall servers or devices at this tier are expected to protect a small enclave or network using a limited sized rule set in support of a limited number of applications, servers and/or devices. Devices in this tier typically reside in the access layer in the hierarchical internetworking model. Features included in this tier include high availability, NAT/PAT, application layer filtering, stateful TCP and UDP connections and packet inspection, smart application protocol support (port redirection for FTP, SQLnet, RTSP, DNS, etc.). Redundant power paths are also common.

## ***SLIN 0003AD CATEGORY 3 APPLIANCES***

### **Tier 2 - Firewall**

A firewall is a software based application suite or hardware based network appliance designed to permit and/or deny access to a network, enclave or data center based upon configured rules. Basic features common to each proceeding tier are high availability, NAT/PAT, application layer filtering, stateful TCP and UDP connections and packet inspection, smart application protocol support (port redirection for FTP, SQLnet, RTSP, DNS, etc.), cost effective bandwidth capability, and cost effective simultaneous connection support.

#### **Tier 2b (Medium)**

Firewalls in this tier typically support multiple enclaves and networks and therefore the servers support multiple customers and applications. Features included in this tier commonly include all the features outlines in tier 2a above, plus virtualization capabilities, high availability, IDS capabilities, multiple site-to-site VPN connection termination, high-speed network interface connections (up to 1 Gbps per interface), and are commonly scalable to include increased capabilities and new technologies through the installation of line cards or modules. Devices in this tier typically reside in the aggregation or distribution layers of the network.

## ***SLIN 0003AE CATEGORY 3 APPLIANCES***

### **Tier 2 - Firewall**

A firewall is a software based application suite or hardware based network appliance designed to permit and/or deny access to a network, enclave or data center based upon configured rules. Basic features common to each proceeding tier are high availability, NAT/PAT, application layer filtering, stateful TCP and UDP connections and packet inspection, smart application protocol support (port redirection for FTP, SQLnet, RTSP, DNS, etc.), cost effective bandwidth capability, and cost effective simultaneous connection support.

#### **Tier 2c (Large)**

Tier 2c is described as the high performance security device or server that protects entire data centers or large enterprise networks. This level device should support features included in the tiers above, plus upgradable hardware, support for multiple high speed network interface cards (1 Gbps or faster) , and are commonly scalable to include increased capabilities and new technologies through the installation of line cards or modules. Devices in this tier typically reside at the core layer of the network.

### ***SLIN 0003AF CATEGORY 3 APPLIANCES***

#### **Tier 3 - Intrusion Detection System**

Category 3; Tier 3 of this contract focuses on Intrusion Detection System and the features required in a datacenter. Intrusion Detection Systems are essential to a secure and confidential computing environment.

##### **Tier 3a (Small)**

Tier 3a Intrusion Detection Systems would be the smallest sensor used on the network. They would provide real-time and historical analytics based on vulnerability and anomaly based inspection methods. This data would be aggregated and sent to a central management location for processing. Tier 3a Intrusion Detection Systems should be capable of identifying vulnerabilities as well as reporting real-time security threats. Automatic trend identification and analysis should be a common function of Tier 3a Intrusion Detection Systems. Tier 3a Intrusion Detection Systems would generally support a throughput of approximately 100 Mbps.

### ***SLIN 0003AG CATEGORY 3 APPLIANCES***

#### **Tier 3 - Intrusion Detection System**

Category 3; Tier 3 of this contract focuses on Intrusion Detection System and the features required in a datacenter. Intrusion Detection Systems are essential to a secure and confidential computing environment.

##### **Tier 3b (Medium)**

Tier 3b Intrusion Detection Systems would incorporate all the features of a Tier 3a Sensor, however the size of the supported site or enclave would be significantly larger. Tier 3b Intrusion Detection Systems would be used to the perimeter of a large LAN or medium Campus network. Expected throughput for a Tier 3b system would be approximately 1 Gbps.

### ***SLIN 0003AH CATEGORY 3 APPLIANCES***

#### **Tier 3 - Intrusion Detection System**

Category 3; Tier 3 of this contract focuses on Intrusion Detection System and the features required in a datacenter. Intrusion Detection Systems are essential to a secure and confidential computing environment.

##### **Tier 3c (Large)**

Tier 3c Intrusion Detection Systems would incorporate all the features of Tier 3a and Tier 3b Sensors, however the size of the supported site or enclave would be significantly larger. Tier 3c Intrusion Detection Systems would be used at the top of the network topology, likely in a DMZ environment. Expected throughput for a Tier 3c system would be approximately 10 Gbps.

### ***SLIN 0003AJ CATEGORY 3 APPLIANCES***

#### **Tier 4 - SMTP Email Security Appliance**

Email security appliances are used to protect the enterprise from external attacks and prevent internal email viruses from spreading. Features typically found in this class of email security appliance are spam defense, virus defense, phishing defense, and other email related threats.

##### **Tier 4a (Small)**

This tier meets the requirements generally needed for specific application or smaller workload requirements. Features that are typically found in this class are: virus defense, phishing, mail relay.

### ***SLIN 0003AK CATEGORY 3 APPLIANCES***

#### **Tier 4 - SMTP Email Security Appliance**

Email security appliances are used to protect the enterprise from external attacks and prevent internal email viruses from spreading. Features typically found in this class of email security appliance are spam defense, virus defense, phishing defense, and other email related threats.

##### **Tier 4b (Medium)**

This tier focuses on meeting the requirements at a datacenter level and should be able to support the bandwidth, storage, and concurrent sessions to support the workloads at each center. Features that are typically found in this class are: centralized management, spam protection, virus defense, phishing defense, mail relay, attachment blocking, and data loss prevention.

### ***SLIN 0003AL CATEGORY 3 APPLIANCES***

#### **Tier 4 - SMTP Email Security Appliance**

Email security appliances are used to protect the enterprise from external attacks and prevent internal email viruses from spreading. Features typically found in this class of email security appliance are spam defense, virus defense, phishing defense, and other email related threats.

#### **Tier 4c (Large)**

This tier encompasses the higher end enterprise class appliances. Features that are typically found in this class are: centralized management, Policy enforcement, spam protection, virus defense, SMTP relay, attachment blocking, and data loss prevention.

### ***SLIN 0003AM CATEGORY 3 APPLIANCES***

#### **Tier 5 - Wan Optimizers**

This focuses on network WAN optimization and the features required in the datacenter. WAN optimization products seek to accelerate a broad range of applications accessed by distributed enterprise users via eliminating redundant transmissions, staging data in local caches, compressing and prioritizing data, and streamlining chatty protocol. WAN optimization also helps avoid packet delivery issues common in shared WAN environments.

#### **Tier 5a (Small)**

This Tier is more suitable to support individual workloads and applications. Devices in this range have the ability of supporting anywhere from 2 Mbps up to 45 Mbps throughput. It should also have the ability of supporting anywhere from 300 to 6,000 concurrent connections. This tier should have the ability to store anywhere between 80 and 400 GB of data and in most cases will be set up in standalone disk drives.

### ***SLIN 0003AN CATEGORY 3 APPLIANCES***

#### **Tier 5 - Wan Optimizers**

This focuses on network WAN optimization and the features required in the datacenter. WAN optimization products seek to accelerate a broad range of applications accessed by distributed enterprise users via eliminating redundant transmissions, staging data in local caches, compressing and prioritizing data, and streamlining chatty protocol. WAN optimization also helps avoid packet delivery issues common in shared WAN environments.

### **Tier 5b (Medium)**

This tier is the largest tier of optimizers and runs a much more robust platform. This tier would be utilized to provide WAN optimization services for an enterprise datacenter supporting multiple customer workloads and applications. It is capable of supporting from 90 Mbps up to 1 Gbps in total throughput and support from 7,500 connections to 100,000 connections. This tier should have the ability to store anywhere between 600 GB and 4.4 TB of data and would have the ability to do some sort of RAID configuration to support Storage fault tolerance.

#### ***SLIN 0003AP CATEGORY 3 APPLIANCES***

### **Tier 6 - Authentication, Authorization and Accounting (AAA) Security Server or Appliance**

The AAA Security Server or Appliance provides centralized authentication, authorization and accounting services for user access to network-based resources. Common features services that manage user access using the RADIUS, LDAP and/or TACACS+ protocols. Systems commonly provide for centralized management and the ability for multiple servers or appliances to be configured to work together using a single user database. Granular management is allowed by applying permission controls to logical grouping of equipment and users. The service can be a software package installed on a physical or virtual server, or a dedicated hardware appliance.

#### ***SLIN 0003AQ CATEGORY 3 APPLIANCES***

### **Tier 7 - Client VPN Appliance**

Client VPN appliances are an essential resource when managing our datacenter resources remotely. This function needs to support the latest features focusing on secure remote connectivity.

#### **Tier 7a (Small)**

This tier focuses on the lower capacity models of the client VPN appliances that may be used to access isolated customer enclaves or individual network resources. Although this is a lower end tier the features required will be the same. Features typically found in this tier are: SSL and IPSEC protocol support, AAA support, CAC authentication, and granular access control.

#### ***SLIN 0003AR CATEGORY 3 APPLIANCES***

### **Tier 7 - Client VPN Appliance**

Client VPN appliances are an essential resource when managing our datacenter resources remotely. This function needs to support the latest features focusing on secure remote connectivity.



## **Tier 7b (Medium)**

This tier addresses the medium sized yet feature rich appliances that could be used on a site to site basis or for large workloads. Features typically found in this tier are: AAA support, CAC authentication, policy based client firewall, clustering, dual redundant power supplies, SSL and IPSEC protocol support, and granular access control.

### ***SLIN 0003AS CATEGORY 3 APPLIANCES***

## **Tier 7 - Client VPN Appliance**

Client VPN appliances are an essential resource when managing our datacenter resources remotely. This function needs to support the latest features focusing on secure remote connectivity.

## **Tier 7c (Large)**

This tier encompasses the higher end enterprise class appliances with greater scalability and support for greater number of users, bandwidth, and functionality. Features typically found in this tier are: AAA support, CAC authentication, policy based client firewall, and granular access control.

### ***SLIN 0003AT CATEGORY 3 APPLIANCES***

## **Tier 8 - Protocol Analyzer**

This function describes the requirements needed in a network packet capture and protocol analysis appliance.

## **Tier 8a (Small)**

Tier 9a protocol analyzers allow for verification and analysis of traffic flowing between a multiple number of devices and networks. Features include gathering and analyzing network statistics on bandwidth and response times, protocol analysis to determine application functionality, and protocol analysis to identify anomalous or erroneous traffic types or patterns. It is common for tier 9a devices to capture and identify network intrusion attempts or network misuse by users. Network forensics capabilities are common at this tier as well. The ability to remotely administer the devices allows for ease in troubleshooting issues at remote locations. Devices at this tier also commonly provide detailed protocol analysis enterprise wide to isolate application response time problems across numerous networks. Long term trending analysis is also done at this level to determine the adequacy of network connections and to anticipate future network bandwidth requirements. Tier 9b devices would also have the responsibility of monitoring SLA enforcement for network and application availability as well as application response times. The functions at this level occur across multiple networks and physical locations. Interface speeds for these devices are usually less than 8 Gbps.

## ***SLIN 0003AU CATEGORY 3 APPLIANCES***

### **Tier 8 - Protocol Analyzer**

This function describes the requirements needed in a network packet capture and protocol analysis appliance.

#### **Tier 8b (Medium)**

This level includes all of the functions listed under Tier 9a while supporting interface speeds and capture rates at or above 8 Gbps.

## ***SLIN 0003AV CATEGORY 3 APPLIANCES***

### **Tier 9 - DNS Appliance**

#### **Tier 9a (Small)**

A DNS appliance provides IP name resolution services to clients on the network. This device can resolve names into IPv4 addresses and names into IPv6 addresses. The device will also perform reverse lookups, resolving IPv4 addresses into names and IPv6 addresses into names. A DNS appliance can accept any type of query via IPv4 or IPv6 protocols. A DNS appliance supports DNSsec, permitting individual responses to be authenticated.

Performance: 10,000 to 15,000 queries per second

## ***SLIN 0003AW CATEGORY 3 APPLIANCES***

### **Tier 9 - DNS Appliance**

#### **Tier 9b (Large)**

A DNS appliance provides IP name resolution services to clients on the network. This device can resolve names into IPv4 addresses and names into IPv6 addresses. The device will also perform reverse lookups, resolving IPv4 addresses into names and IPv6 addresses into names. A DNS appliance can accept any type of query via IPv4 or IPv6 protocols. A DNS appliance supports DNSsec, permitting individual responses to be authenticated.

Performance: 75,000 to 100,000 queries per second

## ***SLIN 0003AX CATEGORY 3 APPLIANCES***

### **Tier 10 – Global Load Balancer**

#### **Tier 10a (Small)**

A global load balancer provides application delivery services to clients around the world. A GLB solution will direct users to an appropriate application site based upon several criteria. A GLB device determines client-to-server proximity by computing the round-trip delay between the client and the data center site. To provide the optimal user experience, the least-loaded, closest available sites to the client are selected to deliver application traffic. Generally, small devices are scaled down versions of the larger devices with less performance and lower cost.

Performance: 300,000 to 400,000 connections per second

## ***SLIN 0003AY CATEGORY 3 APPLIANCES***

### **Tier 10 – Global Load Balancer**

#### **Tier 10b (Medium)**

A global load balancer provides application delivery services to clients around the world. A GLB solution will direct users to an appropriate application site based upon several criteria. A GLB device determines client-to-server proximity by computing the round-trip delay between the client and the data center site. To provide the optimal user experience, the least-loaded, closest available sites to the client are selected to deliver application traffic.

A GLB device continually monitors data center sites to detect any changes in servers or services due to varying health and traffic conditions. Configurable site load thresholds allow organizations to align health-checking parameters with the server and service capabilities of each site. All of these features work in conjunction with existing DNS as well as DNS Security Extensions (DNSSEC) servers to minimize service disruption and maximize application uptime.

Medium GLB devices include some additional features such as redundant power supplies and a few line card slots for additional ports.

Performance: 1 million to 1.5 million connections per second

## ***SLIN 0003AZ CATEGORY 3 APPLIANCES***

### **Tier 10 – Global Load Balancer**

#### **Tier 10c (Large)**

A global load balancer provides application delivery services to clients around the world. A GLB solution will direct users to an appropriate application site based upon several criteria. A GLB device determines client-to-server proximity by computing the round-trip delay between the client and the data center site. To provide the optimal user experience, the least-loaded, closest available sites to the client are selected to deliver application traffic.

A GLB device continually monitors data center sites to detect any changes in servers or services due to varying health and traffic conditions. Configurable site load thresholds allow organizations to align health-checking parameters with the server and service capabilities of each site. All of these features work in conjunction with existing DNS as well as DNS Security Extensions (DNSSEC) servers to minimize service disruption and maximize application uptime.

Large GLB devices include additional features such as redundant power supplies, large number of line cards for additional ports, an ability to scale processor capacity within the chassis, and better performance.

Performance: 3 million to 4 million connections per second

## ***SLIN 0003BA CATEGORY 3 APPLIANCES***

### **Tier 11 – Matrix/Aggregation Devices**

This function describes the requirements needed in switching, aggregation and filtering appliances.

#### **Tier 11a (Small)**

Tier 9a matrix/aggregation devices pull data from multiple sources which is aggregated, filtered and then directed to data mining and forensic devices for further analysis. Features include redundancy within a single chassis, granularity of user access, 10 Gigabit Ethernet and 8 Gigabit Fiber Channels, independent control and data planes. The ability to remotely administer all devices via an intuitive interactive graphical user interface from any one device allows for ease in troubleshooting issues at remote locations and system administration capabilities. Devices at this tier typically have bandwidth speeds at or below 8 Gigabits with port capacity at or below 88 ports.

## ***SLIN 0003BB CATEGORY 3 APPLIANCES***

### **Tier 11 - Matrix/Aggregation Devices**

This function describes the requirements needed in switching, aggregation and filtering appliances.

#### **Tier 11b (Large)**

This level includes all of the functions listed under Tier 9a while supporting interface speeds and transfer rates at 10Gbps. This level also incorporates double the port capacity of 1 Gigabit interfaces while also adding equal port capacity for 10 Gigabit interfaces.

## ***SLIN 0003BC CATEGORY 3 APPLIANCES***

### **Tier 12 - Network Tap**

#### **Tier 12a (Small)**

Passive 10/100/1000BaseT taps establish permanent access ports without introducing a point of failure or disturbing other network connections. The tap either auto-negotiates communication or uses an external DIP switch to set fixed speed and duplexing parameters. Passive taps deliver full-duplex monitoring with zero impact on network traffic around the clock.

Network taps may tap into either UTP copper or fiber optic connections. Fiber optic taps may be regenerative. Regenerative taps minimize the amount of light pulled from the main line and amplify it going to the monitor ports. This results in many devices being able to monitor the same fiber optic line without losing signal integrity.

Monitored links: 1 or 2

## *SLIN 0003BD CATEGORY 3 APPLIANCES*

### **Tier 12 - Network Tap**

#### **Tier 12b (Large)**

Passive 10/100/1000BaseT taps establish permanent access ports without introducing a point of failure or disturbing other network connections. The tap either auto-negotiates communication or uses an external DIP switch to set fixed speed and duplex parameters. Passive taps deliver full-duplex monitoring with zero impact on network traffic around the clock.

Network taps may tap into either UTP copper or fiber optic connections. Fiber optic taps may be regenerative. Regenerative taps minimize the amount of light pulled from the main line and amplify it going to the monitor ports. This results in many devices being able to monitor the same fiber optic line without losing signal integrity.

Additional features found on large taps include the ability to tap a copper link and send the packets out a fiber optic link, or tap a fiber optic link and send packets out a copper link. Redundant power supplies may also be found on regenerative taps.

Monitored links: 3 or more

### **VOICE SYSTEM HW AND VMWARE**

#### ***SLIN 0003BE***

#### ***SMALL 500 SEATS OR LESS***

Description: Dual HA pair to run Unified Communications clustered voice applications. UC applications are JITC certified on UCS systems. **Properly sized for 500 CUWL Std or 500 CUWL Pro users.** Includes required VMware Ent Plus software. Does not include application software licensing, user endpoints or gateways so must be ordered with those associated voice system elements.

#### ***SLIN 0003BF***

#### ***MEDIUM 500-1000 SEATS***

Description: Six clustered systems to run Unified Communications voice applications as an HA redundant system. UC applications are JITC certified on UCS systems. **Properly sized for 1000 CUWL Std or 1000 CUWL Pro users.** Includes required VMware Ent Plus software. Does not include application software licensing, user endpoints or gateways so must be ordered with those associated voice system elements.

***SLIN 0003BG***

***LARGE 1000 TO 10000 SEATS***

Description: Eight clustered systems to run Unified Communications voice applications as a highly available system. Includes associated compute fabric interconnects, blade chassis and top of rack switching. UC applications are JITC certified on UCS systems. **Properly sized for 10000 CUWL Std or 10000 CUWL Pro users.** Includes required VMware Ent Plus software. Does not include application software licensing, user endpoints or gateways so must be ordered with those associated voice system elements.

**UNIFIED CONTACT CENTER EXPRESS**

***SLIN 0003BH***

***SMALL (25 USERS)***

Description: Unified Contact Center Express meets the needs of midmarket and enterprise branch-office or departmental companies that need easy-to-deploy, easy-to-use, secure, virtual, highly available, and sophisticated customer interaction management. Unified Contact Center Express delivers powerful, agent-based service as well as fully integrated self-service applications results in reduced business costs and improved customer response by providing sophisticated and distributed automatic call distributor (ACD), interactive voice response (IVR), computer telephony integration (CTI), and agent and desktop services. **Sized for 25 users/agents.** Does not include servers, systems or handsets so must be ordered alongside those additional elements.

***SLIN 0003BJ CATEGORY 3 APPLIANCES***

**Tier 16 – Console Server**

A console server provides remote access to devices via those devices' serial (console) interfaces. This is accomplished by connecting the serial (non-routable) interface of a device to the console server. The console server is remotely accessible and acts as a remote gateway for accessing the local devices' serial interfaces. Dial-up and dial-back modem access may be required in some circumstances.

These types of devices may also be known as console access servers, console management servers, serial concentrators, or serial console servers.

**Tier 16a (Small)**

This tier would be for a micro datacenter that is not expected to outgrow a single console server of less than 48 serial interphases. SSH must be one of the remote access methods supported.

## ***SLIN 0003BK CATEGORY 3 APPLIANCES***

### **Tier 16 – Console Server**

A console server provides remote access to devices via those devices serial (console) connections. This is accomplished by connecting the serial (non-routable) interface of a device to the console server. The console server is remotely accessible via SSH and acts as a remote gateway for accessing the local devices' serial interfaces. Dial up and dial-back modem access may be required in some circumstances.

These types of devices may also be known as console access servers, console management servers, serial concentrators, or serial console servers.

### **Tier 16b (Medium)**

This tier would be for a standard datacenter or one that can potentially grow to need a console server of 48 ports or more. If the requirement is for more serial connections to be remotely accessible than 48, one option is to deploy additional 48 port console servers as necessary to keep up with datacenter growth. SSH must be one of the remote access methods supported.

## ***SLIN 0003BL CATEGORY 3 APPLIANCES***

### **Tier 3 – Intrusion Detection System**

Category 3; Tier 3 of this contract focuses on Intrusion Detection System and the features required in a datacenter. Intrusion Detection Systems are essential to a secure and confidential computing environment.

### **Tier 3d (Virtualized)**

Tier 3d Intrusion Detection Systems virtualized IDS/IPS sensors for VMware or virtualized environments

## ***SLIN 0003BM CATEGORY 3 APPLIANCES***

### **Tier 3 – Intrusion Detection System**

Category 3; Tier 3 of this contract focuses on Intrusion Detection System and the features required in a datacenter. Intrusion Detection Systems are essential to a secure and confidential computing environment.

### **Tier 3e (Expansion for tier 3b and 3c)**

Tier 3e Intrusion Detection Systems expansion ports for medium and large IDS/IPS sensors



## ***SLIN 0003BN CATEGORY 3 APPLIANCES***

### **Tier 3 – SSL Decryption Appliance**

Category 3; Tier 3 of this contract focuses on an Appliance which decrypts SSL-encrypted traffic

#### **Tier 3f (medium)**

Tier 3f is an Appliance which decrypts SSL-encrypted traffic at 1Gbps line rate inspection.

#### ***SLIN 0003BT*                      *MEDIUM (50 USERS)***

Description: Unified Contact Center Express meets the needs of midmarket and enterprise branch-office or departmental companies that need easy-to-deploy, easy-to-use, secure, virtual, highly available, and sophisticated customer interaction management. Unified Contact Center Express delivers powerful, agent-based service as well as fully integrated self-service applications results in reduced business costs and improved customer response by providing sophisticated and distributed automatic call distributor (ACD), interactive voice response (IVR), computer telephony integration (CTI), and agent and desktop services. **Sized for 50 users/agents.** Does not include servers, systems or handsets so must be ordered alongside those additional elements.

#### ***SLIN 0003BU*                      *LARGE (300 USERS)***

Description: Unified Contact Center Express meets the needs of midmarket and enterprise branch-office or departmental companies that need easy-to-deploy, easy-to-use, secure, virtual, highly available, and sophisticated customer interaction management. Unified Contact Center Express delivers powerful, agent-based service as well as fully integrated self-service applications results in reduced business costs and improved customer response by providing sophisticated and distributed automatic call distributor (ACD), interactive voice response (IVR), computer telephony integration (CTI), and agent and desktop services. **Sized for 300 users/agents.** Does not include servers, systems or handsets so must be ordered alongside those additional elements.

### **UNIFIED WORKSPACE LICENSE (CUWL)**

#### **Standard 50 user License Pack**

#### ***SLIN 0003BV***

Description: Unified Workspace Standard Edition. This edition includes all features in Standard Edition: Built on the Unified Communications Manager platform, this edition includes call control, voice messaging, unified clients, mobility, and presence with the enterprise scalability to support business as it grows. Each user is entitled to two device licenses, handset, softphone or both. Does not include servers, systems or handsets so must be ordered alongside those additional elements. Does not include servers, systems or handsets so must be ordered alongside those additional elements. **For SLIN 0003BE minimum quantity of 10 must be ordered, for SLIN 0003BF minimum quantity of 20 must be ordered, and for SLIN 0003BG minimum quantity of 200 must be ordered.**

## **Professional 50 user License Pack**

### ***SLIN 0003BW***

Description: Unified Workspace Professional Edition: This edition includes all features in Standard Edition, plus Unified Mobile Communicator client, audio, video and web conferencing, and other advanced capabilities. Each user is entitled to ten device licenses, handset, softphone or both. Does not include servers, systems or handsets so must be ordered alongside those additional elements. **For SLIN 0003BE minimum quantity of 10 must be ordered, for SLIN 0003BF minimum quantity of 20 must be ordered and for SLIN 0003BG a minimum quantity of 200 must be ordered.**

### ***SLIN 0003BX***

#### ***BASIC PHONE SINGLE UNIT TIER***

Description: The Basic IP Phone, includes wideband audio, backlit color touchscreen display, and an integrated Gigabit Ethernet, direct access to six telephone lines (or combination of lines, speed dials, and direct access to telephony features), five interactive soft keys that guide you through call features and functions, and an intuitive four-way (plus Select key) navigation cluster. A hands-free speakerphone and handset designed for high-fidelity wideband audio are standard, as is a built-in headset connection. Does not include application software licensing, servers or gateways so must be ordered with those associated voice system elements.

### ***SLIN 0003BY***

#### ***MID FEATURE PHONE SINGLE UNIT***

Description: The Mid-Feature IP Phone includes wideband audio, backlit color touchscreen display, and an integrated Gigabit Ethernet, direct access to eight telephone lines (or combination of lines, speed dials, and direct access to telephony features), five interactive soft keys that guide you through call features and functions, and an intuitive four-way (plus Select key) navigation cluster. A hands-free speakerphone and handset designed for high-fidelity wideband audio are standard, as is a built-in headset connection. Does not include application software licensing, servers or gateways so must be ordered with those associated voice system elements.

### ***SLIN 0003BZ***

#### ***MID FEATURE PHONE WITH IP CAMERA***

Description: The Mid-Feature IP Phone with IP Camera includes advanced collaborative multimedia features that provide the use of voice, video applications. Highlights include Gigabit Ethernet, high-definition voice, high-resolution, fully-backlit, pixel-based color touchscreen display, desktop 802.11a/b/g Wi-Fi connectivity along with a new industrial design and user interface designed for simplicity and high usability. Includes the Unified Video Camera option. Does not include application software licensing, servers or gateways so must be ordered with those associated voice system elements.

**SLIN 0003CA****48 PORT PoE SWITCH FOR VOIP**

Description: An enterprise-class stackable wiring closet switch that facilitates the deployment of secure converged applications while maximizing investment protection for evolving network and application requirements. Combining 10/100/1000 access ports, QoS, Power over Ethernet (PoE) and other advanced services configurations with 10 Gigabit Ethernet uplinks that enhance worker productivity by enabling applications such as IP telephony, wireless, and video. Does not include voice application software, user licensing, servers, handsets or gateways so must be ordered with those associated voice system elements.

**CISCO UNIVERSAL VOIP GATEWAY****SLIN 0003CB****VOIP GATEWAY**

Description: Single voice router/gateway offers embedded hardware encryption acceleration for voice and video, optional firewall, intrusion prevention, call processing, voicemail, and application services. In addition, the platforms support the industry's widest range of wired and wireless connectivity options sized for 500 users; six T1/E1 ports, equivalent SIP trunking via CUBE, secondary call processing via SRST and PVDM3 DSP resources sized for 500 users. Does not include voice application software, user licensing, servers, or handsets so must be ordered with those associated voice system elements. Must order at least two (2) voice gateways for fully redundant high available voice system topology as part of ORDER FOR SLIN 0003BE. Must order at least four (4) voice gateways for fully redundant high available voice system topology as part of ORDER FOR SLIN 0003BF. Must order at least twenty (20) voice gateways for fully redundant high available voice system topology as part of ORDER FOR SLIN 0003BG

**TERMS AND CONDITIONS APPLICABLE TO KNIGHT POINT 132-52 SERVICES**

It is understood that the monthly charges are based on a 48 month expected usage term. The agency’s confirmation herein is that an essential need exists for the communication equipment/appliances for 48 months and agrees not to replace or substitute the contract’s equipment/appliances with other equipment/appliances procured outside of KPS’ contract as long as the essential need exists. It is understood that the organizations will pursue the continued appropriation of funds not to exceed one year duration; however, the agency shall not be obligated to continue performance during the full 48 month period if funding is not appropriated and is therefore unavailable. The organization may, at any time within or at the end of the 48 month period and for any reason, acquire the underlying product and terminate the service based on the following table.

IN SERVICE MONTHS	ECONOMIC REMAINING MONTHS	BUYOUT MONTH FACTOR
1	59	48.35
2	58	47.8
3	57	47.26
4	56	46.71
5	55	46.15
6	54	45.59
7	53	45.03
8	52	44.46
9	51	43.88
10	50	43.31
11	49	42.72
12	48	42.13
13	47	41.54
14	46	40.94
15	45	40.34
16	44	39.73
17	43	39.11
18	42	38.49
19	41	37.87
20	40	37.24
21	39	36.6
22	38	56.96
23	37	35.32
24	36	34.67
25	35	34.01
26	34	33.35
27	33	32.68
28	32	32.01
29	31	31.33
30	30	30.65
31	29	29.96
32	28	29.26
33	27	28.56
34	26	27.86
35	25	27.14
36	24	26.43
37	23	25.7
38	22	24.97
39	21	24.24
40	20	23.49
41	19	22.75

IN SERVICE MONTHS	ECONOMIC REMAINING MONTHS	BUYOUT MONTH FACTOR
42	18	21.99
43	17	21.23
44	16	20.47
45	15	19.69
46	14	18.91
47	13	18.13
48	12	17.34
49	11	16.54
50	10	15.74
51	9	14.93
52	8	14.11
53	7	13.29
54	6	12.46
55	5	11.62
56	4	10.77
57	3	9.92
58	2	9.07
59	1	8.2
60	0	7.33

## KNIGHT POINT SYSTEMS' HORIZON® DESCRIPTION

Knight Point Systems' Horizon® is a portfolio of solutions that are intended to be able to span a customer's technology needs across multiple phases of cloud adoption. Through Horizon® customers no longer have to choose an "all or nothing" approach to the Cloud – customers are able to choose the right service model for their system/s: traditional services, on-premise (private) clouds, off-premise (public, private, and community) clouds, or any combination thereof (hybrid clouds)! The Horizon® portfolio currently includes three commercially available cloud computing services broken across the traditional IaaS, PaaS, and SaaS models. Presented in this proposal to be added to Knight Point's GSA Schedule is the first of those models: *Horizon® IaaS Cloud Services* – an infrastructure-as-a-service offering for on-prem or off-prem clouds in any deployment model. A summary of *Horizon® IaaS Cloud Services* offering can be seen in figure 1 below:

	Model	Public	Private	Community	Hybrid	Notes
Horizon® IaaS Cloud Services	IaaS	✓	✓	✓	✓	- Standard IaaS options include: Public, Private, and Federal Community Clouds. - Hybrid model assumes either all clouds are provided or managed by KPS or are compatible* with KPS tools/offering

\* Compatible offerings primarily include any other public cloud with API access to the offering, as well as private clouds with inherent integration options

Table 1 - Summary of Horizon® Cloud Services

## DELIVERY MODELS

Horizon's® base cloud offering is the Horizon® IaaS Cloud. This cloud, acting in an IaaS delivery model, forms the basis on which all of Horizon's® additional cloud offerings are built. The Horizon® IaaS Cloud Service offers compute, storage, and network resources for system administrators who would typically perform the traditional management duties of the rest of the stack. The Horizon® IaaS Cloud Service stresses visible performance expectations, giving Admins the ability to set and measure against their performance requirements. With regards to computing resources, Admins are able to provision VMs of 5 standard sizes – XS, S, M, L, and XL – and can add vCPU and RAM resources in an a la carte method to get to the exact resources needed. Additionally, Admins are able to add storage by the GB at three varying levels of IOPS performance. Lastly, Admins have the option to select networking resources based on expected performance (bandwidth) or quantity of data transferred.

## SERVICE DEPLOYMENT MODELS

Knight Point Systems strives to provide customers with The Technology You Need. When You Need It.® In keeping with that, KPS strives to ensure all of the cloud solutions in the Horizon® portfolio are available in any deployment model so that customers are able to use the technology they need, when and where they need it. This is accomplished in two ways:

- First, KPS ensures Horizon® cloud solutions build off of one another, with any PaaS or SaaS solution taking on the characteristics of the underlying IaaS or PaaS solution, respectively.
- Second, KPS implements IaaS clouds with common architecture across all deployment models, allowing standard PaaS and SaaS solutions to interchangeably build off of any of the IaaS deployments.

These two guiding principles form the basis of how the *Horizon® IaaS Cloud Service* meets the requirements for all deployment models.

The *Horizon® IaaS Cloud Service* is provided to customers in a public deployment via the Horizon® IaaS Commercial Cloud. Currently, Horizon's® Commercial IaaS Cloud is available to any party willing to contract cloud IaaS services. It makes use of industry best practices and standards in accordance with KPS's CMMI Level 2, ISO 27001, and ITSM certifications.

The Horizon® IaaS Cloud Service is provided to Federal customers in a community deployment via the Horizon® IaaS Federal Cloud. This community cloud is available only to Federal customers and in addition to the standards implemented in the Commercial Cloud, Horizon's® Federal community IaaS cloud also implements FedRAMP and DoD SRG Level 5 controls to ensure the highest level of security possible.

In a private deployment storage, compute, and network equipment and resources are assigned to only service a single customer, and no others, giving them their own "pool" of resources to draw from. These implementations can include the cloud management tools on top of the resources, or not, at the customer's preference. In private IaaS cloud deployments, clouds are set up to technically mirror either public or community security controls as desired, though *Knight Point Systems, LLC*

non-technical implementation of best practices, standards, and security processes will largely depend on the specific solution. Additionally, the KPS model allows bulk purchase of a single resource for private clouds, often referred to as “Storage-as-a-Service”, “Compute-as-a-Service”, or “Capacity-as-a-Service”. These bulk resources purchases may require additional purchase of equipment depending on the overall solution architecture implemented by the customer.

The key enabler to Hybrid deployments is Zeus. At the VM creation screen in Zeus, customers are able to select any cloud they have permissions to deploy to, giving them the ability to create, connect, and manage their virtual resources in any deployment model, all from a single interface.

## **ESSENTIAL CLOUD CHARACTERISTICS**

Access to all Horizon® Solutions and Services is provided through Zeus, a first-of-its-kind “as a Service” automation tool that provides our customers with unparalleled visibility into their infrastructure while also streamlining the call order / procurement process. As a result of standardized infrastructure architecture across Horizon® cloud solutions, Zeus is able to connect, view, and provision resources automatically in any Deployment Model. As such, Zeus acts as the customer portal for all Horizon® solutions, enabling those solutions to meet many of the essential characteristics of Cloud Services as defined by NIST.

### ***ON-DEMAND SERVICE***

Through Zeus customers are able to access service catalog information and a call order management system that allows them to provision services at standardized pricing without ever engaging Contractor personnel. Zeus is quickly customized around customers’ existing call order processes, with the ability to provide alerts and statuses on call order workflow. It is capable of providing notifications to specific user groups, identifying the action needed for every step of the call order process. This centralized system reduces unnecessary delays typically seen in email-based processes. Additionally, Zeus’s centralized billing page gathers all executed orders and self-provisioned services to give the customer a single location to view all consolidated billing information. By automating many of the traditionally manual processes, Zeus reduces call order execution timelines from weeks to mere hours or minutes and generates invoices based on the exact number of services engaged by the customer each month.

In addition to making use of Zeus’s call order management and billing features, Horizon® IaaS Cloud Services can be provisioned through the Virtual Machine Management Dashboard in Zeus. Provisioning options are broken into the basic components of Infrastructure: Network, Storage, and Compute. These resource components can be defined for individual VMs or whole environments, giving customers the ability to integrate and provision the exact resources needed in any deployment model – public, private, community, or hybrid; at any location – on-premise or off-premise.

### ***BROAD NETWORK ACCESS***

Zeus is accessible via secure connection over the Internet and can be reached via any standard browser, including those on mobile and tablet devices. This allows customers to provision services in any deployment model, from anywhere, as-needed. Horizon’s® common architecture results in all of the Horizon® cloud services following the same rules for network access. These rules are highly dependent on the location and deployment model of the solution and can be seen below:

- Private - Knight Point Systems is able to stand up private cloud solutions on customer premises (on-prem) or off of customer premises (off-prem). If the solution is provided on-prem, network access is entirely dependent on network access at the customer site. It is assumed in these situations that the customer understands their own network access requirements and is able to provide the required levels of connectivity to the solution. There are no restrictions on how customers provide network access to private on-prem clouds, though significant deviation from the standard network architecture of the cloud solution itself may require customer purchase of additional networking equipment. If the solution is off-prem, KPS is able to provide all of the network access options detailed in “Public and Community” below.
- Public and Community – In the Horizon® Public and Community cloud deployment models, KPS acts as the customer's ISP, providing internet access and IP address space. If requirements do not allow internet access, Site-to-Site IPSEC Tunnels are available to extend solutions to customer networks and ensure easy, secure access. The KPS off-premise locations are strategically located in data centers considered to be government “Cloud Access Points” (CAPs), with ready-access to many government internal WANs. As part of any

Horizon® cloud service solution, KPS is able to provide cross-connects (Single-Mode fiber, Multi-Mode fiber (62.5 and 50 micron), CAT5, CAT6, CAT5 (T1), CAT3 (POTS), and COAX) as private circuits to other ISP's or customer's cages within the same data center, or on the same campus as needed. Lastly, Horizon® solutions include access to the Cloud Exchange: a directly-connected group of over 450 public and private cloud providers that allow connectivity to one another without the customer needing to traverse the internet - saving the customer money and providing more-secure connections.

- Hybrid – If using a hybrid deployment model, KPS Cloud Solutions combine the above three options as needed to provide connectivity. Often customers do not want Internet access to Zeus for hybrid deployments that include private cloud solutions. If security requirements do not allow this, customers are able to use Site-to-Site IPSEC Tunnels to require users log on to the customer network to access Zeus. This allows customers to easily extend their own secure access control implementations to the solution, while still maintaining visibility into the solution.

**RESOURCE POOLING**

Cloud computing allows independent computing resources to be pooled, which means that operating environments can be dynamically assigned and reassigned according to consumer demand. In this regard the Horizon® solutions once again build off of one another to ultimately achieve resource pooling. Infrastructure resources like vCPUs, GBs of RAM, GBs of Storage, and Network Bandwidth are pooled together for use by cloud customers. As each customer consumes more resources the pool of available resources shrinks, but when those customers relinquish use of the resources, the pool grows. Zeus allows these resources to be continuously dynamically allocated to whichever customer needs them. In the three Horizon cloud services, each deployment model has its own set of infrastructure resources.

**RAPID ELASTICITY**

Elasticity provides the largest benefit to cloud customers: automatically and dynamically scaling computing resources, and adjusting computing resources as required. Rapid elasticity of infrastructure resources is achieved through the provisioning capabilities of Zeus. Through Zeus, customers see decreases in manual ordering activity timelines from weeks and days to hours and minutes or less – giving them the ability to provision, de-provision, and modify services immediately. Through Horizon’s Managed Cloud Service, automated elasticity is achievable for computing resources – where load balancing and auto-scaling tools are implemented to ensure platforms scale to the exact size required by an application at any given moment. Making use of its inherent auto-scaling capabilities, the Horizon DOaaS Service scales each DevOps environment as the number of users increases and storage and compute requirements go up.

**MEASURED SERVICE**

Horizon® Cloud Service customers pay only for what they use. The pay-as-you-go model reduces upfront investment costs and allows resource usage to be transparently monitored, controlled, and reported for both the provider and the consumer. In addition to Zeus providing consolidated billing for all Horizon® Cloud Services, Zeus also serves as the portal for all Horizon® Cloud Service customers to view monitoring statistics for all services provisioned.

Services measurements available to customers:

IaaS Cloud Services
- VM Network Resources Provisioned vs. Used
- VM Compute Resources Provisioned vs. Used
- VM Storage Resources Provisioned vs. Used
- Total Network Resources Provisioned vs. Used
- Total Compute Resources provisioned vs. Used
- Total Storage Resources Provisioned vs. Used

Table 2 – Sample Service Measurements by Cloud Service

In addition to service-specific measurements, through Zeus’s call order management system, customers are able to track statistics on order activities to find workflow choke points as well as other key metrics in the ordering process. Through the Horizon Help Desk, general ticketing statistics are available for all service and help requests submitted to the Horizon Service Desk. Lastly, uptime and outage statistics are available for all Horizon cloud services.



**Knight Point Professional Services - Cloud Services**

<b>SIN</b>	<b>PRODUCT NO</b>	<b>PRODUCT DESCRIPTION</b>	<b>UOI</b>	<b>GSA Price</b>
132-40	Bandwidth - 10 Mbps Increment	10Mbps of Bandwidth to customer environment per month	\$ / Increment / Month	\$23.08
132-40	Bandwidth - 100 Mbps Increment	100Mbps of Bandwidth to customer environment per month	\$ / Increment / Month	\$201.93
132-40	Bandwidth - 1 Gbps Increment	1000Mbps of Bandwidth to customer environment per month	\$ / Increment / Month	\$1,730.79
132-40	Bandwidth - Private Circuit	Fee for access to a private circuit (does not include circuit cost)	\$ / Month	\$398.99
132-40	Data Transfer Out (0-10,000 GB)	Per GB cost of data transfer each month	\$ / GB / Month	\$0.10
132-40	Data Transfer Out (10,001 - 50,000 GB)	Per GB cost of data transfer each month	\$ / GB / Month	\$0.05
132-40	Data Transfer Out (50,001 - 150,000 GB)	Per GB cost of data transfer each month	\$ / GB / Month	\$0.03
132-40	Data Transfer Out (150,000+ GB)	Per GB cost of data transfer each month	\$ / GB / Month	\$0.02
132-40	Public IP	Monthly cost of IP for customer use	\$ / IP / Month	\$0.73
132-40	LAN to LAN IPSEC Tunnel	Monthly cost of LAN to LAN IPSEC Tunnel for customer use	\$ / Tunnel / Month	\$19.95
132-40	Gb Storage - Standard	Monthly Cost of 1 GB and .1 IOPS	\$ / GB / Month	\$0.12
132-40	Gb Storage - Enhanced	Monthly Cost of 1 GB and 1 IOPS	\$ / GB / Month	\$0.39
132-40	Gb Storage - High Performance	Monthly Cost of 1 GB and 10 IOPS	\$ / GB / Month	\$2.82
132-40	A La Carte CPU (1 CPU)	Cost to add a single additional CPU to VM	\$ / CPU / Hour	\$0.04
132-40	A La Carte RAM (1 GB RAM)	Cost to add a single additional GB of RAM to VM	\$ / GB / Hour	\$0.04
132-40	XS (1 CPU, 2Gb RAM) Resource Only (for BYOL/BYOI)	Bundled Compute Resources	\$ / Bundle / Hour	\$0.09
132-40	S (2 CPU, 4Gb RAM) Resource Only (for BYOL/BYOI)	Bundled Compute Resources	\$ / Bundle / Hour	\$0.15
132-40	M (4 CPU, 8Gb RAM) Resource Only (for BYOL/BYOI)	Bundled Compute Resources	\$ / Bundle / Hour	\$0.25
132-40	L (8 CPU, 16Gb RAM) Resource Only (for BYOL/BYOI)	Bundled Compute Resources	\$ / Bundle / Hour	\$0.51
132-40	XL (16CPU, 32Gb RAM) Resource Only (for BYOL/BYOI)	Bundled Compute Resources	\$ / Bundle / Hour	\$0.85
132-40	XS (1 CPU, 2Gb RAM, 40Gb) Windows 2008	Bundled Compute Resources with License	\$ / Bundle / Hour	\$0.19
132-40	S (2 CPU, 4Gb RAM, 40Gb) Windows 2008	Bundled Compute Resources with License	\$ / Bundle / Hour	\$0.30
132-40	M (4 CPU, 8Gb RAM, 40Gb) Windows 2008	Bundled Compute Resources with License	\$ / Bundle / Hour	\$0.50
132-40	L (8 CPU, 16Gb RAM, 40Gb) Windows 2008	Bundled Compute Resources with License	\$ / Bundle / Hour	\$1.01
132-40	XL (16CPU, 32Gb RAM, 40Gb) Windows 2008	Bundled Compute Resources with License	\$ / Bundle / Hour	\$1.70

SIN	PRODUCT NO	PRODUCT DESCRIPTION	UOI	GSA Price
132-40	XS (1 CPU, 2Gb RAM, 40Gb) Windows 2012	Bundled Compute Resources with License	\$ / Bundle / Hour	\$0.19
132-40	S (2 CPU, 4Gb RAM, 40Gb) Windows 2012	Bundled Compute Resources with License	\$ / Bundle / Hour	\$0.30
132-40	M (4 CPU, 8Gb RAM, 40Gb) Windows 2012	Bundled Compute Resources with License	\$ / Bundle / Hour	\$0.50
132-40	L (8 CPU, 16Gb RAM, 40Gb) Windows 2012	Bundled Compute Resources with License	\$ / Bundle / Hour	\$1.01
132-40	XL (16 CPU, 32Gb RAM, 40Gb) Windows 2012	Bundled Compute Resources with License	\$ / Bundle / Hour	\$1.70
132-40	XS (1 CPU, 2Gb RAM, 40Gb) RHEL 7	Bundled Compute Resources with Subscription	\$ / Bundle / Hour	\$0.14
132-40	S (2 CPU, 4Gb RAM, 40Gb) RHEL 7	Bundled Compute Resources with Subscription	\$ / Bundle / Hour	\$0.22
132-40	M (4 CPU, 8Gb RAM, 40Gb) RHEL 7	Bundled Compute Resources with Subscription	\$ / Bundle / Hour	\$0.37
132-40	L (8 CPU, 16Gb RAM, 40Gb) RHEL 7	Bundled Compute Resources with Subscription	\$ / Bundle / Hour	\$0.75
132-40	XL (16CPU, 32Gb RAM, 40Gb) RHEL 7	Bundled Compute Resources with Subscription	\$ / Bundle / Hour	\$1.26
132-40	Gb Storage - Standard	Monthly Cost of 1 GB and .1 IOPS	\$ / GB / Month	\$0.23
132-40	Gb Storage - Enhanced	Monthly Cost of 1 GB and 1 IOPS	\$ / GB / Month	\$0.72
132-40	Gb Storage - High Performance	Monthly Cost of 1 GB and 10 IOPS	\$ / GB / Month	\$5.25
132-40	A La Carte CPU (1 CPU)	Cost to add a single additional CPU to VM	\$ / CPU / Hour	\$0.06
132-40	A La Carte RAM (1 GB RAM)	Cost to add a single additional GB of RAM to VM	\$ / GB / Hour	\$0.07
132-40	XS (1 CPU, 2Gb RAM) Resource Only (for BYOL/BYOI)	Bundled Compute Resources	\$ / Bundle / Hour	\$0.17
132-40	S (2 CPU, 4Gb RAM) Resource Only (for BYOL/BYOI)	Bundled Compute Resources	\$ / Bundle / Hour	\$0.27
132-40	M (4 CPU, 8Gb RAM) Resource Only (for BYOL/BYOI)	Bundled Compute Resources	\$ / Bundle / Hour	\$0.45
132-40	L (8 CPU, 16Gb RAM) Resource Only (for BYOL/BYOI)	Bundled Compute Resources	\$ / Bundle / Hour	\$0.92
132-40	XL (16CPU, 32Gb RAM) Resource Only (for BYOL/BYOI)	Bundled Compute Resources	\$ / Bundle / Hour	\$1.55
132-40	XS (1 CPU, 2Gb RAM, 40Gb) Windows 2008	Bundled Compute Resources with License	\$ / Bundle / Hour	\$0.37
132-40	S (2 CPU, 4Gb RAM, 40Gb) Windows 2008	Bundled Compute Resources with License	\$ / Bundle / Hour	\$0.57
132-40	M (4 CPU, 8Gb RAM, 40Gb) Windows 2008	Bundled Compute Resources with License	\$ / Bundle / Hour	\$0.95
132-40	L (8 CPU, 16Gb RAM, 40Gb) Windows 2008	Bundled Compute Resources with License	\$ / Bundle / Hour	\$1.90
132-40	XL (16CPU, 32Gb RAM, 40Gb) Windows 2008	Bundled Compute Resources with License	\$ / Bundle / Hour	\$3.16
132-40	XS (1 CPU, 2Gb RAM, 40Gb) Windows 2012	Bundled Compute Resources with License	\$ / Bundle / Hour	\$0.37

SIN	PRODUCT NO	PRODUCT DESCRIPTION	UOI	GSA Price
132-40	S (2 CPU, 4Gb RAM, 40Gb) Windows 2012	Bundled Compute Resources with License	\$ / Bundle / Hour	\$0.57
132-40	M (4 CPU, 8Gb RAM, 40Gb) Windows 2012	Bundled Compute Resources with License	\$ / Bundle / Hour	\$0.95
132-40	L (8 CPU, 16Gb RAM, 40Gb) Windows 2012	Bundled Compute Resources with License	\$ / Bundle / Hour	\$1.90
132-40	XL (16 CPU, 32Gb RAM, 40Gb) Windows 2012	Bundled Compute Resources with License	\$ / Bundle / Hour	\$3.16
132-40	XS (1 CPU, 2Gb RAM, 40Gb) RHEL 7	Bundled Compute Resources with Subscription	\$ / Bundle / Hour	\$0.27
132-40	S (2 CPU, 4Gb RAM, 40Gb) RHEL 7	Bundled Compute Resources with Subscription	\$ / Bundle / Hour	\$0.43
132-40	M (4 CPU, 8Gb RAM, 40Gb) RHEL 7	Bundled Compute Resources with Subscription	\$ / Bundle / Hour	\$0.71
132-40	L (8 CPU, 16Gb RAM, 40Gb) RHEL 7	Bundled Compute Resources with Subscription	\$ / Bundle / Hour	\$1.42
132-40	XL (16CPU, 32Gb RAM, 40Gb) RHEL 7	Bundled Compute Resources with Subscription	\$ / Bundle / Hour	\$2.35
132-40	Installation: Physical Server (Cabling, HW)	Installation of physical hardware and cabling in data center for managed hosting.	\$ / Install	\$349.12
132-40	Installation: Physical Blade Chassis and Blade (Cabling, HW)	Installation of physical hardware and cabling in data center for managed hosting.	\$ / Install	\$349.12
132-40	Installation: Physical Network Device / Appliance (Cabling, HW)	Installation of physical hardware and cabling in data center for managed hosting.	\$ / Install	\$349.12
132-40	Installation: Server OS	Installation of operating system on physical or virtual machines.	\$ / Install	\$174.56
132-40	Installation: Blade Blade Server OS	Installation of operating system on physical machines.	\$ / Install	\$174.56
132-40	Installation: Device / Appliance Configuration	Configuration of physical device / appliance.	\$ / Install	\$174.56
132-40	Installation: KPS Cloud Management Suite: CloudSeed and Zeus	Installation and configuration of the suite of KPS Cloud Management tools including CloudSeed and Zeus	\$ / Install	\$1,496.22
132-40	Horizon Cloud Management Suite	Monthly access to and ongoing maintenance and patching of Horizon Cloud Management Suite	\$ / Cloud / Month	\$997.48
132-40	Gb Storage - Standard	Monthly Cost to add 1 GB and .1 IOPS to pool	\$ / GB / Month	\$0.23
132-40	Gb Storage - Enhanced	Monthly Cost to add 1 GB and 1 IOPS to pool	\$ / GB / Month	\$0.72
132-40	Gb Storage - High Performance	Monthly Cost to add 1 GB and 10 IOPS to pool	\$ / GB / Month	\$5.25
132-40	A La Carte CPU (1 CPU)	Cost to add a single additional CPU to pool	\$ / CPU / Month	\$41.65
132-40	A La Carte RAM (1 GB RAM)	Cost to add a single additional GB of RAM to pool	\$ / GB / Month	\$49.51