EAGLE
TECHNOLOGY GROUP

GENERAL SERVICES ADMINISTRATION
Federal Acquisition Service
Authorized Federal Supply Schedule FSS Price List

Online access to contract ordering information, terms and conditions, up-to-date pricing, and the option to create an electronic delivery order is available through GSA Advantage!™, a menu-driven database system. The INTERNET address for GSA Advantage!™ is: https://GSAAdvantage.gov

Schedule Title: Multiple Award Schedule
Federal Supply Group: Information Technology
Special Item Number (SIN):
511210   518210C   54151S   54151HEAL   611420   OLM
FSC/PSC Code: Various
Contract Number: GS35F418CA
Contract Period: 07/13/20 – 07/12/25

EAGLE TG, LLC

2115 Stephens Place, Suite 310
New Braunfels, TX 78130
(P) 830-549-3111
https://eagletg.com
Contract Administrator: Steven McDonald / steven.mcdonald@eagletg.com
Business Size: Small Disadvantaged Business

NAOB   SBA U.S. Small Business Administration   ISBEE Certified

For more information on ordering go to the following website: https://gsa.gov/schedules.

Pricelist current through Modification PS-0040, effective 08/26/2021.

Eagle TG, LLC (Eagle TG) provides expertise and services to help organizations reduce costs through improved IT. We help our clients increase organizational performance by combining our innovative use of technology and extensive experience in a range of industries to deliver solutions that help our clients achieve a rapid and sustainable business advantage.

GSA MAS - AWARDED SPECIAL ITEM NUMBERS (SINS)

Note: 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.

SIN 511210 – Software Licenses
FSC/PSC Code: 7A21. SIN 511210 includes **WSO2** application software subscription support and query support hours.

SIN 518210C – Cloud and Cloud Related IT Professional Services
FSC/PSC Code: DB10. SIN 518210C includes **WSO2** cloud computing and management services.

SIN 54151S – Professional Information Technology Professional Services
FSC/PSC Code: DA01. SIN 54151S includes resources and facilities management, database planning and design, systems analysis and design, network services, programming, conversion and implementation support, network services project management, data/records management, and other services relevant to 29CFR541.400.

SIN 54151HEAL – Health Information Technology Services
FSC/PSC Code: DA01. SIN 54151HEAL includes a wide range of Health IT services to include connected health, electronic health records, health information exchanges, health analytics, personal health information management, innovative Health IT solutions, health informatics, emerging Health IT research, and other Health IT services.

SIN 611420 – Training Courses
FSC/PSC Code: U012. SIN 611420 includes **WSO2** training products, services, and solutions.

SIN OLM – Order-Level Materials (OLMs)
FSC/PSC Code: Various. SIN OLM includes supplies and/or services acquired in direct support of an individual task or delivery order placed against a Federal Supply Schedule (FSS) contract or FSS blanket purchase agreement (BPA).

TABLE OF CONTENTS

1. CUSTOMER INFORMATION

1a. **Table of Awarded Special Item Number(s) with appropriate cross-reference to page numbers:**

SIN	SIN Description
511210	Software Licenses
518210C	Cloud and Cloud Related IT Professional Services
611420	Information Technology Training
54151S	Professional Information Technology Services
54151HEAL	Health Information Technology Services
OLM	Order-Level Materials (OLMs)

1b. **Identification of the lowest priced model number and lowest unit price for that model for each special item number awarded in the contract.** See pricing beginning on page 4.

1c. **If the Contractor is proposing hourly rates a description of all corresponding commercial job titles, experience, functional responsibility, and education for those types of employees or subcontractors who will perform services shall be provided. If hourly rates are not applicable, indicate "Not applicable" for this item.** See Labor Category Descriptions beginning on page 17.

2. **Maximum Order:**
SIN 511210:	$500,000
SIN 518210C:	$500,000
SIN 54151S:	$500,000
SIN 54151HEAL:	$500,000
SIN 611420:	$250,000

3. **Minimum Order:** $100.00

4. **Geographic Coverage:** Domestic.

5. **Point(s) of production:** Same as company address.

6. **Discount from list prices or statement of net price:** Government net prices (discounts already deducted).

7. **Quantity discounts:**
SIN 511210:	1% for order(s) $500,000 and above
SIN 518210C:	1% for order(s) $1,000,000 and above
SIN 54151S:	1% for order(s) $400,000 and above
SIN 54151HEAL:	1% for order(s) $400,000 and above
SIN 611420:	1% for order(s) $1,000,000 and above

WSO2 offers volume discounts for instance-based (only) software subscriptions under SIN 511210 which Eagle TG offers to GSA. These include the following:

> 5% off product subscriptions over $50,000
> 10% off product subscriptions over $100,000
> 15% off product subscriptions over $200,000
> 20% off product subscriptions over $400,000
> 25% off product subscriptions over $800,000

8. **Prompt payment terms:** 1% - Net 20 Calendar days from receipt of invoice or date of acceptance, whichever is later (Net 30 default).

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

9. **Foreign items:** None.

10a. **Time of Delivery:** Specified on the Task Order.

10b. **Expedited Delivery:** Contact Contractor.

10c. **Overnight and 2-day delivery:** Contact Contractor.

10d. **Urgent Requirements:** Items available for expedited delivery are noted in this price list.

11. **F.O.B Points:** Destination.

12a. **Ordering Address:**   Contract Management
2115 Stephens Place, Suite 310
New Braunfels, TX 78130
(P) 830-549-3111
ETG-Biz@eagletg.com

12b. **Ordering procedures:** See Federal Acquisition Regulation (FAR) 8.405-3.

13. **Payment address (is):**   Eagle TG, LLC
ATTN: Accounting
2115 Stephens Place, Suite 310
New Braunfels, TX 78130
(P) 830-549-3111
mtea.ap-ar@mteauthority.com

14. **Warranty provision:** Contractor's standard commercial warranty.

15. **Export Packing Charges:** Not Applicable.

16. **Terms and conditions of rental, maintenance, and repair:** Not Applicable.

17. **Terms and conditions of installation:** Not Applicable.

18a. **Terms and conditions of repair parts:** Not Applicable.

18b. **Terms and conditions for any other services:** Not Applicable.

19. **List of service and distribution points:** Not Applicable.

20. **List of participating dealers:** Not Applicable.

21. **Preventive maintenance:** Not Applicable.

22a. Environmental attributes, e.g., recycled content, energy efficiency, and/or reduced pollutants: Not Applicable.

22b. **If applicable, indicate that Section 508 compliance information is available for the information and communications technology (ICT) products and services and show where full details can be found (e.g. contractor's website or other location.) ICT accessibility standards can be found at: https://Section508.gov.** N/A

23. **Unique Entity Identifier (UEI) Number:** MBZ8E2DEZTM9

24. **Notification regarding registration in System for Award Management (SAM) database:** Eagle TG, LLC is registered at SAM.gov.

2. SIN 511210 SOFTWARE LICENSING

OEM	Part Number	Description	Price
WSO2	P-AS-6-19	Annual Subscription for WSO2 Application Server/Apache Tomcat	$3,354.65
WSO2	P-AS-QA-6-19	Annual Subscription for WSO2 Application Server/Apache Tomcat (Pre-Prod)	$855.11
WSO2	P-MSF4J-1-19	Annual Subscription for WSO2 MSF4J	$1,973.32
WSO2	P-GR-5-19	Annual Subscription for WSO2 Governance Registry	$32,362.53
WSO2	P-NX-3-19	Annual Subscription for Nginx Plus	$4,183.45
WSO2	P-API-2-19	Annual Subscription for WSO2 API Manager (Renewal)	$16,400.69
WSO2	P-API-QA-2-19	Annual Subscription for WSO2 API Manager (Pre-Prod Renewal)	$4,100.17
WSO2	P-API-AP-2-19	Annual Subscription for WSO2 API Manager: Analytics Profile (Renewal)	$1,061.76
WSO2	P-API-AP-QA-2-19	Annual Subscription for WSO2 API Manager: Analytics Profile (Pre-Prod Renewal)	$265.45
WSO2	P-API-GP-2-19	Annual Subscription for WSO2 API Manager: Gateway Profile (Renewal)	$10,937.23
WSO2	P-API-GP-QA-2-19	Annual Subscription for WSO2 API Manager: Gateway Profile (Pre-Prod Renewal)	$2,734.31
WSO2	P-API-KM-2-19	Annual Subscription for WSO2 API Manager: Key Manager Profile (Renewal)	$10,937.23
WSO2	P-API-KM-QA-2-19	Annual Subscription for WSO2 API Manager: Key Manager Profile (Pre-Prod Renewal)	$2,734.31
WSO2	P-API-PP-2-19	Annual Subscription for WSO2 API Manager: Publisher Portal Profile (Renewal)	$10,937.23
WSO2	P-API-PP-QA-2-19	Annual Subscription for WSO2 API Manager: Publisher Portal Profile (Pre-Prod Renewal)	$2,734.31
WSO2	P-API-DP-2-19	Annual Subscription for WSO2 API Manager: Developer Portal Profile (Renewal)	$10,937.23
WSO2	P-API-DP-QA-2-19	Annual Subscription for WSO2 API Manager: Developer Portal Profile (Pre-Prod Renewal)	$2,734.31
WSO2	P-API-TP-2-19	Annual Subscription for WSO2 API Manager: Traffic Manager Profile (Renewal)	$1,061.76
WSO2	P-API-TP-QA-2-19	Annual Subscription for WSO2 API Manager: Traffic Manager Profile (Pre-Prod Renewal)	$265.45
WSO2	P-EI-BP-6-19	Annual Subscription for WSO2 Enterprise Integrator: Business Process Profile (Renewal)	$16,400.69
WSO2	P-EI-BP-QA-6-19	Annual Subscription for WSO2 Enterprise Integrator: Business Process Profile (Pre-Prod Renewal)	$4,100.18
WSO2	P-EI-IP-6-19	Annual Subscription for WSO2 Enterprise Integrator: Integration Profile (Renewal)	$10,937.23
WSO2	P-EI-IP-QA-6-19	Annual Subscription for WSO2 Enterprise Integrator: Integration Profile (Pre-Prod Renewal)	$2,734.30
WSO2	P-IS-5-19	Annual Subscription for WSO2 Identity Server (Renewal)	$21,874.45

OEM	Part Number	Description	Price
WSO2	P-IS-QA-5-19	Annual Subscription for WSO2 Identity Server (Pre-Prod Renewal)	$5,468.62
WSO2	P-PL-00001-1-19	Annual WSO2 Integration Platform Subscription (<6 cores)	$7,893.31
WSO2	P-PL-00006-1-19	Annual WSO2 Integration Platform Subscription (6+ cores)	$5,919.97
WSO2	P-PL-00010-1-19	Annual WSO2 Integration Platform Subscription (10+ cores)	$5,327.98
WSO2	P-PL-00025-1-19	Annual WSO2 Integration Platform Subscription (25+ cores)	$4,801.75
WSO2	P-PL-00050-1-19	Annual WSO2 Integration Platform Subscription (50+ cores)	$4,341.32
WSO2	P-PL-00100-1-19	Annual WSO2 Integration Platform Subscription (100+ cores)	$3,880.87
WSO2	P-PL-00250-1-19	Annual WSO2 Integration Platform Subscription (250+ cores)	$3,288.88
WSO2	P-PL-00500-1-19	Annual WSO2 Integration Platform Subscription (500+ cores)	$2,828.43
WSO2	P-PL-01000-1-19	Annual WSO2 Integration Platform Subscription (1000+ cores)	$2,236.44
WSO2	Dev-10-19	Subscription Query Support - 10 hours	$2,275.90
WSO2	Dev-25-19	Subscription Query Support - 25 hours	$5,413.48
WSO2	Dev-50-19	Subscription Query Support - 50 hours	$10,313.91
WSO2	Dev-100-19	Subscription Query Support - 100 hours	$18,549.25
WSO2	Dev-200-19	Subscription Query Support - 200 hours	$32,651.95
WSO2	S-TAM-B-19	WSO2 Consulting Services - Technical Account Manager - Basic	$10,210.24
WSO2	S-TAM-S-19	WSO2 Consulting Services - Technical Account Manager - Standard	$58,905.23
WSO2	S-TAM-P-19	WSO2 Consulting Services - Technical Account Manager - Premium	$137,445.53
WSO2	S-TAM-E-19	WSO2 Consulting Services - Technical Account Manager - Elite	$255,255.98
WSO2	S-QSP-19	WSO2 QuickStart	$19,713.62
WSO2	S-QR-19	Quarterly Review Package	$23,562.09
WSO2	P-API-2-20	Annual Subscription for WSO2 API Manager (Renewal)	$17,056.72
WSO2	P-API-QA-2-20	Annual Subscription for WSO2 API Manager (Pre-Prod Renewal)	$4,264.18
WSO2	P-API-AP-2-20	Annual Subscription for WSO2 API Manager: Analytics Profile (Renewal)	$1,104.24
WSO2	P-API-AP-QA-2-20	Annual Subscription for WSO2 API Manager: Analytics Profile (Pre-Prod Renewal)	$276.06
WSO2	P-API-GP-2-20	Annual Subscription for WSO2 API Manager: Gateway Profile (Renewal)	$11,374.72

OEM	Part Number	Description	Price
WSO2	P-API-GP-QA-2-20	Annual Subscription for WSO2 API Manager: Gateway Profile (Pre-Prod Renewal)	$2,843.68
WSO2	P-API-KM-2-20	Annual Subscription for WSO2 API Manager: Key Manager Profile (Renewal)	$11,374.72
WSO2	P-API-KM-QA-2-20	Annual Subscription for WSO2 API Manager: Key Manager Profile (Pre-Prod Renewal)	$2,843.68
WSO2	P-API-PP-2-20	Annual Subscription for WSO2 API Manager: Publisher Portal Profile (Renewal)	$11,374.72
WSO2	P-API-PP-QA-2-20	Annual Subscription for WSO2 API Manager: Publisher Portal Profile (Pre-Prod Renewal)	$2,843.68
WSO2	P-API-DP-2-20	Annual Subscription for WSO2 API Manager: Developer Portal Profile (Renewal)	$11,374.72
WSO2	P-API-DP-QA-2-20	Annual Subscription for WSO2 API Manager: Developer Portal Profile (Pre-Prod Renewal)	$2,843.68
WSO2	P-API-TP-2-20	Annual Subscription for WSO2 API Manager: Traffic Manager Profile (Renewal)	$1,104.23
WSO2	P-API-TP-QA-2-20	Annual Subscription for WSO2 API Manager: Traffic Manager Profile (Pre-Prod Renewal)	$276.06
WSO2	P-EI-BP-6-20	Annual Subscription for WSO2 Enterprise Integrator: Business Process Profile (Renewal)	$17,056.71
WSO2	P-EI-BP-QA-6-20	Annual Subscription for WSO2 Enterprise Integrator: Business Process Profile (Pre-Prod Renewal)	$4,264.18
WSO2	P-EI-IP-6-20	Annual Subscription for WSO2 Enterprise Integrator: Integration Profile (Renewal)	$11,374.72
WSO2	P-EI-IP-QA-6-20	Annual Subscription for WSO2 Enterprise Integrator: Integration Profile (Pre-Prod Renewal)	$2,843.68
WSO2	P-IS-5-20	Annual Subscription for WSO2 Identity Server (Renewal)	$22,749.43
WSO2	P-IS-QA-5-20	Annual Subscription for WSO2 Identity Server (Pre-Prod Renewal)	$5,687.36
WSO2	P-API-00001-1-20	Annual WSO2 API Management Platform Subscription (<6 cores)	$8,209.03
WSO2	P-API-00006-1-20	Annual WSO2 API Management Platform Subscription (6+ cores)	$6,156.77
WSO2	P-API-00010-1-20	Annual WSO2 API Management Platform Subscription (10+ cores)	$5,541.10
WSO2	P-API-00025-1-20	Annual WSO2 API Management Platform Subscription (25+ cores)	$4,993.83
WSO2	P-API-00050-1-20	Annual WSO2 API Management Platform Subscription (50+ cores)	$4,514.97
WSO2	P-API-00100-1-20	Annual WSO2 API Management Platform Subscription (100+ cores)	$4,036.11
WSO2	P-API-00250-1-20	Annual WSO2 API Management Platform Subscription (250+ cores)	$3,420.43
WSO2	P-API-00500-1-20	Annual WSO2 API Management Platform Subscription (500+ cores)	$2,941.57

OEM	Part Number	Description	Price
WSO2	P-API-01000-1-20	Annual WSO2 API Management Platform Subscription (1000+ cores)	$2,325.89
WSO2	P-PL-00001-1-20	Annual WSO2 Integration Platform Subscription (<6 cores)	$8,209.03
WSO2	P-PL-00006-1-20	Annual WSO2 Integration Platform Subscription (6+ cores)	$6,156.77
WSO2	P-PL-00010-1-20	Annual WSO2 Integration Platform Subscription (10+ cores)	$5,541.10
WSO2	P-PL-00025-1-20	Annual WSO2 Integration Platform Subscription (25+ cores)	$4,993.83
WSO2	P-PL-00050-1-20	Annual WSO2 Integration Platform Subscription (50+ cores)	$4,514.97
WSO2	P-PL-00100-1-20	Annual WSO2 Integration Platform Subscription (100+ cores)	$4,036.11
WSO2	P-PL-00250-1-20	Annual WSO2 Integration Platform Subscription (250+ cores)	$3,420.43
WSO2	P-PL-00500-1-20	Annual WSO2 Integration Platform Subscription (500+ cores)	$2,941.57
WSO2	P-PL-01000-1-20	Annual WSO2 Integration Platform Subscription (1000+ cores)	$2,325.89
WSO2	P-IS-00001-1-20	Annual WSO2 Identity Platform Subscription (<6 cores)	$8,209.03
WSO2	P-IS-00006-1-20	Annual WSO2 Identity Platform Subscription (6+ cores)	$6,156.77
WSO2	P-IS-00010-1-20	Annual WSO2 Identity Platform Subscription (10+ cores)	$5,541.10
WSO2	P-IS-00025-1-20	Annual WSO2 Identity Platform Subscription (25+ cores)	$4,993.83
WSO2	P-IS-00050-1-20	Annual WSO2 Identity Platform Subscription (50+ cores)	$4,514.97
WSO2	P-IS-00100-1-20	Annual WSO2 Identity Platform Subscription (100+ cores)	$4,036.11
WSO2	P-IS-00250-1-20	Annual WSO2 Identity Platform Subscription (250+ cores)	$3,420.43
WSO2	P-IS-00500-1-20	Annual WSO2 Identity Platform Subscription (500+ cores)	$2,941.57
WSO2	P-IS-01000-1-20	Annual WSO2 Identity Platform Subscription (1000+ cores)	$2,325.89
WSO2	Dev-10-20	Subscription Query Support - 10 hours	$2,366.94
WSO2	Dev-25-20	Subscription Query Support - 25 hours	$5,630.03
WSO2	Dev-50-20	Subscription Query Support - 50 Hours	$10,726.47
WSO2	Dev-100-20	Subscription Query Support - 100 Hours	$19,291.23
WSO2	Dev-200-20	Subscription Query Support - 200 Hours	$33,958.03
WSO2	S-TAM-B-20	WSO2 Consulting Services - Technical Account Manager - Basic	$10,618.65

OEM	Part Number	Description	Price
WSO2	S-TAM-S-20	WSO2 Consulting Services - Technical Account Manager - Standard	$61,261.44
WSO2	S-TAM-P-20	WSO2 Consulting Services - Technical Account Manager - Premium	$142,943.35
WSO2	S-TAM-E-20	WSO2 Consulting Services - Technical Account Manager - Elite	$265,466.22
WSO2	S-QSP-ON-20	WSO2 QuickStart On-site	$20,502.16
WSO2	S-QSP-R-20	WSO2 QuickStart Remote	$11,788.41
WSO2	S-AC-O-20	WSO2 On-Site Architecture Checkpoint (1 Day)	$2,455.92
WSO2	S-AC-R-20	WSO2 Remote Architecture Checkpoint (1 Day)	$491.18
WSO2	S-AR-O-20	WSO2 On-Site Architecture Review (2 Days)	$9,823.68
WSO2	S-AR-R-20	WSO2 Remote Architecture Review (2 Days)	$2,947.10
WSO2	S-QR-O-20	WSO2 On-Site Quarterly Architecture Review Package (4 Quarters x 2 Days)	$24,504.57
WSO2	S-QR-R-20	WSO2 Remote Quarterly Architecture Review Package (4 Quarters x 2 Days)	$8,841.31
WSO2	S-CR-O-20	WSO2 On-Site Configuration Review (2 Days)	$7,367.76
WSO2	S-CR-R-20	WSO2 Remote Configuration Review (2 Days)	$1,964.74
WSO2	S-IP-20	WSO2 Impulse Pre-Assessment	$14,244.33

3. SIN 518210C (CLOUD SERVICES)

The prices, terms and conditions stated under SIN 518210C Cloud Computing Services apply exclusively to Cloud Computing Services within the scope of this Information Technology Schedule.

This SIN provides ordering activities with access to technical services that run-in cloud environments and meet the NIST Definition of Cloud Computing Essential Characteristics. Services relating to or impinging on cloud that do not meet all NIST essential characteristics should be listed in other SINs.

The scope of this SIN is limited to cloud capabilities provided entirely as a service. Hardware, software and other artifacts supporting the physical construction of a private or other cloud are out of scope for this SIN. Currently, an Ordering Activity can procure the hardware and software needed to build on premise cloud functionality, through combining different services on other MAS SINs (e.g., 54151S).

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

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

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

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

Table 1 – Cloud Computing Services SIN

SIN Description	Sub-Categories
✓ Commercially available cloud computing services ✓ Meets the National Institute for Standards and Technology (NIST) definition of Cloud Computing essential characteristics. ✓ Open to all deployment models (private, public, community or hybrid), vendors specify deployment models	**1. Software as a Service (SaaS):** Consumer uses provider's applications on cloud infrastructure. Does not manage/control platform or infrastructure. Limited application-level configuration may be available. **2. Platform as a Service (PaaS):** Consumer deploys applications onto cloud platform service using provider-supplied tools. Has control over deployed applications and some limited platform configuration but does not manage the platform or infrastructure. **3. Infrastructure as a Service (IaaS):** Consumer provisions computing resources. Has control over OS, storage, platform, deployed applications and some limited infrastructure configuration, but does not manage the infrastructure.

Responsibilities of the Contractor

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

a. Acceptance Testing

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

b. Training

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

c. Information Assurance/Security Requirements

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

d. Related Professional Services

The Contractor is responsible for working with the Ordering Activity to identify related professional services and any other services available on other SINs that may be associated with deploying a complete cloud solution. Any additional substantial and ongoing professional services related to the offering such as integration, migration, and other cloud professional services are out of scope for this SIN.

e. Performance of Cloud Services

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

The Contractor shall provide appropriate cloud computing services on the date and to the extent and scope agreed to by the Contractor and the Ordering Activity.

f. Reporting

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

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

Responsibilities of the Ordering Activity

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

Cloud services typically operate under a shared responsibility model, with some responsibilities assigned to the Cloud Service Provider (CSP), some assigned to the Ordering Activity, and others shared between the two. The distribution of responsibilities will vary between providers and across service models.

Ordering activities should engage with CSPs to fully understand and evaluate the shared responsibility model proposed. Federal Risk and Authorization Management Program (FedRAMP) documentation will be helpful regarding the security aspects of shared responsibilities, but operational aspects may require additional discussion with the provider.

a. Ordering Activity Information Assurance/Security Requirements Guidance

1. The Ordering Activity is responsible for ensuring to the maximum extent practicable that each requirement issued is in compliance with the Federal Information Security Management Act (FISMA) as applicable.

2. The Ordering Activity shall assign a required impact level for confidentiality, integrity and availability (CIA) prior to issuing the initial statement of work. The Contractor must be capable of meeting at least the minimum-security requirements assigned against a low-impact information system in each CIA assessment area (per FIPS 200) and must detail the FISMA capabilities of the system in each of CIA assessment area.

3. Agency level FISMA certification, accreditation, and evaluation activities are the responsibility of the Ordering Activity. The Ordering Activity reserves the right to independently evaluate, audit, and verify the FISMA compliance for any proposed or awarded Cloud Computing Services.

4. The Ordering Activity has final responsibility for assessing the FedRAMP status of the service, complying with and making a risk-based decision to grant an Authorization to Operate (ATO) for the cloud computing service, and continuous monitoring. A memorandum issued by the Office of Management and Budget (OMB) on Dec 8, 2011, outlines the responsibilities of Executive departments and agencies in the context of FedRAMP compliance.

5. Ordering activities are responsible for determining any additional information assurance and security related requirements based on the nature of the application and relevant mandates.

b. Deployment Model

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

c. Delivery Schedule

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

d. Interoperability

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

e. Performance of Cloud Computing Services

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

f. Reporting

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

g. Privacy

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

h. Accessibility

The Ordering Activity should specify the accessibility characteristics of their service and engage with the Contractor to determine the cloud service is capable of meeting Ordering Activity requirements. For example, a requirement could require assurance that the service is capable of providing accessibility based on Section 508 of the Rehabilitation Act of 1973 (29 U.S.C. 794d).

i. Geographic Requirements

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

j. Data Ownership and Retrieval and Intellectual Property

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

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

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

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

the service. Example cases that might require clarification include status and mode of delivery for:

1. Configuration information created by the government and affecting the government's use of the cloud provider's service.

2. Virtual machine configurations created by the government but operating on the cloud provider's service.

k. Service Location Distribution

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

1. Physical locations underlying the cloud are numerous enough to provide continuity of operations and geographically separate enough to avoid an anticipated single point of failure within the scope of anticipated emergency events.

2. Service endpoints for the cloud can meet anticipated performance requirements in terms of geographic proximity to service requestors.

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

l. Related Professional Services

Ordering activities should engage with Contractors to discuss the availability of limited assistance with initial setup, training and access to the services that may be available through this SIN.

Any additional substantial and ongoing professional services related to the offering such as integration, migration, and other cloud professional services are out of scope for this SIN. Ordering activities should consult the appropriate GSA professional services schedule.

4. SIN 611420 (TRAINING COURSES)

OEM	Part Number	Description	Price
WSO2	T-D-19	WSO2 Training (Day)	$3,440.07
WSO2	T-LA-D-19	WSO2 Training - Lab Assistant (Day)	$1,476.56
WSO2	T-Admin-19	WSO2 Training - Admin Fee	$2,945.27
WSO2	T-HX-19	WSO2 API Hackathon-In-A-Box	$16,689.82
WSO2	T-D-20	WSO2 On-Site Training (Per Day)	$2,593.45
WSO2	T-D-O-20	WSO2 Remote Training (Per Day)	$982.37
WSO2	T-LA-D-20	WSO2 On-site Training - Lab Assistant (Per Day)	$1,296.73
WSO2	T-LA-D-O-20	WSO2 On-Site Training - Admin Fee	$2,888.16
WSO2	T-HX-20	WSO2 API Hackathon-In-A-Box	$17,357.41

Scope

a. The Contractor shall provide training courses normally available to commercial customers, which will permit ordering activity users to make full, efficient use of general-purpose commercial IT products. Training is restricted to training courses for those products within the scope of this solicitation.

b. The Contractor shall provide training at the Contractor's facility and/or at the ordering activity's location, as agreed to by the Contractor and the ordering activity.

Order

Written orders, EDI orders (GSA Advantage! and FACNET), credit card orders, and orders placed under blanket purchase agreements (BPAs) shall be the basis for the purchase of training courses in accordance with the terms of this contract. Orders shall include the student's name, course title, course date and time, and contracted dollar amount of the course.

Time of Delivery

The Contractor shall conduct training on the date (time, day, month, and year) agreed to by the Contractor and the ordering activity.

Cancellation and Rescheduling

a. The ordering activity will notify the Contractor at least seventy-two (72) hours before the scheduled training date, if a student will be unable to attend. The Contractor will then permit the ordering activity to either cancel the order or reschedule the training at no additional charge. In the event the training class is rescheduled, the ordering activity will modify its original training order to specify the time and date of the rescheduled training class.

b. In the event the ordering activity fails to cancel or reschedule a training course within the time frame specified in paragraph a, above, the ordering activity will be liable for the contracted dollar amount of the training course. The Contractor agrees to permit the ordering activity to reschedule a student who fails to attend a training class within ninety (90) days from the original course date, at no additional charge.

c. The ordering activity reserves the right to substitute one student for another up to the first day of class.

d. In the event the Contractor is unable to conduct training on the date agreed to by the Contractor and the ordering activity, the Contractor must notify the ordering activity at least seventy-two (72) hours before the scheduled training date.

Follow-Up Support

The Contractor agrees to provide each student with unlimited telephone support or online support for a period of one (1) year from the completion of the training course. During this period, the student may contact the Contractor's instructors for refresher assistance and answers to related course curriculum questions.

Price for Training

The price that the ordering activity will be charged will be the ordering activity training price in effect at the time of order placement, or the ordering activity price in effect at the time the training course is conducted, whichever is less.

Invoices and Payment

Invoices for training shall be submitted by the Contractor after ordering activity completion of the training course. Charges for training must be paid in arrears (31 U.S.C. 3324). PROMPT PAYMENT DISCOUNT, IF APPLICABLE, SHALL BE SHOWN ON THE INVOICE.

Format and Content of Training

a. The Contractor shall provide written materials (i.e., manuals, handbooks, texts, etc.) normally provided with course offerings. Such documentation will become the property of the student upon completion of the training class.

b. **If applicable** For hands-on training courses, there must be a one-to-one assignment of IT equipment to students.

c. The Contractor shall provide each student with a Certificate of Training at the completion of each training course.

d. The Contractor shall provide the following information for each training course offered:

1. The course title and a brief description of the course content, to include the course format (e.g., lecture, discussion, hands-on training);
2. The length of the course;
3. Mandatory and desirable prerequisites for student enrollment;
4. The minimum and maximum number of students per class;
5. The locations where the course is offered;
6. Class schedules; and
7. Price (per student, per class, as applicable).

e. For those courses conducted at the ordering activity's location, instructor travel charges (if applicable), including mileage and daily living expenses (e.g., per diem charges) are governed by Pub. L. 99-234 and FAR Part 31.205-46, and are reimbursable by the ordering activity on orders placed under the Multiple Award Schedule, as applicable, in effect on the date(s) the travel is performed. Contractors cannot use GSA city pair contracts. The Industrial Funding Fee does NOT apply to travel and per diem charges.

f. For Online Training Courses, a copy of all training material must be available for electronic download by the students.

5. SIN 54151S (PROFESSIONAL IT SERVICES)

Labor Category	Price
Administration/Clerical Level 1 - Apprentice	$39.99
Administration/Clerical Level 2 - Journeyman	$45.38
Administration/Clerical Level 3 - Senior	$66.37
Applications Developer Level 1 - Apprentice	$66.37
Applications Developer Level 2 - Journeyman	$83.91
Applications Developer Level 3 - Senior	$104.90
Applications Developer Level 4 - Master	$141.82
Applications Systems Analyst Level 1 - Apprentice	$68.21
Applications Systems Analyst Level 2 - Journeyman	$83.91
Applications Systems Analyst Level 3 - Senior	$104.90
Applications Systems Analyst Level 4 - Master	$141.82
Analyst I	$91.62
Analyst II	$99.32
Analyst III	$118.62
Business Process Consultant Level 4 - Master	$127.92
Business Systems Analyst Level 4 - Master	$108.64
Chief Information Security Officer Level 6 - Executive	$157.02
Computer Forensic and Intrusion Analyst Level 4 - Master	$108.87
Computer Scientist Level 5 - Director	$244.06
Configuration Management Specialist Level 2 - Journeyman	$90.52
Configuration Management Specialist Level 3 - Senior	$114.25
Configuration Management Specialist Level 4 - Master	$137.97
Consultant I	$110.90
Consultant II	$130.19
Consultant III	$149.47
Data Architect Level 4 - Master	$158.05
Data Warehousing Specialist Level 1 - Apprentice	$90.52
Data Warehousing Specialist Level 2 - Journeyman	$112.49
Data Warehousing Specialist Level 3 - Senior	$142.98
Data Warehousing Specialist Level 4 - Master	$158.05
Database Specialist Level 1 - Apprentice	$84.48

Labor Category	Price
Database Specialist Level 2 - Journeyman	$112.49
Database Specialist Level 3 - Senior	$133.55
Database Specialist Level 4 - Master	$147.64
Disaster Recovery Specialist Level 2 - Journeyman	$120.42
Disaster Recovery Specialist Level 3 - Senior	$142.98
Enterprise Architect	$168.77
Enterprise Architect Level 5 - Director	$174.34
Enterprise Resource Planning (ERP) Analyst Level 4 - Master	$129.13
ERP Business/Architectural Specialist Level 5 - Director	$153.63
Financial Analyst Level 4 - Master	$83.57
Geographic Information System Analyst/Programmer Level 4 - Master	$85.36
Graphics Specialist Level 3 - Senior	$76.82
Groupware Specialist Level 3 - Senior	$112.89
Hardware Engineer Level 1 - Apprentice	$59.37
Hardware Engineer Level 2 - Journeyman	$81.91
Hardware Engineer Level 3 - Senior	$105.01
Hardware Engineer Level 4 - Master	$141.95
Helpdesk Specialist Level 1 - Apprentice	$53.23
Helpdesk Specialist Level 2 - Journeyman	$61.80
Helpdesk Specialist Level 3 - Senior	$85.65
Information Assurance/Security Specialist Level 1 - Apprentice	$92.91
Information Assurance/Security Specialist Level 2 - Journeyman	$105.46
Information Assurance/Security Specialist Level 3 - Senior	$120.42
Information Assurance/Security Specialist Level 4 - Master	$142.98
Information Specialist/Knowledge Engineer Level 3 - Senior	$136.25
Modeling and Simulation Specialist Level 3 - Senior	$153.04
Network Engineer I	$101.26
Network Engineer II	$113.79
Network Engineer III	$149.47
Network Specialist Level 1 - Apprentice	$75.66
Network Specialist Level 2 - Journeyman	$105.46
Network Specialist Level 3 - Senior	$120.42

Labor Category	Price
Network Specialist Level 4 - Master	$160.84
Program Manager I	$106.08
Program Manager II	$126.33
Program Manager Level 4 - Master	$169.20
Project Manager I	$94.51
Project Manager II	$120.54
Project Manager Level 3 - Senior	$147.64
Quality Assurance Specialist Level 1 - Apprentice	$81.03
Quality Assurance Specialist Level 2 - Journeyman	$90.30
Quality Assurance Specialist Level 3 - Senior	$112.89
Quality Assurance Specialist Level 4 - Master	$152.62
Research Analyst Level 4 - Master	$101.12
Software Engineer I	$86.79
Software Engineer II	$103.18
Software Engineer III	$125.37
Strategic/Capital Planner Level 5 - Director	$194.83
Subject Matter Expert Level 2 - Journeyman	$125.43
Subject Matter Expert Level 3 - Senior	$160.84
Subject Matter Expert Level 4 - Master	$184.08
Subject Matter Expert I	$130.19
Subject Matter Expert II	$159.12
Subject Matter Expert III	$188.05
Systems Administrator Level 1 - Apprentice	$86.56
Systems Administrator Level 2 - Journeyman	$101.83
Systems Administrator Level 3 - Senior	$117.11
Systems Administrator I	$72.32
Systems Administrator II	$81.97
Systems Administrator III	$91.62
Systems Engineer Level 4 - Master	$125.87
Systems Engineer I	$101.26
Systems Engineer II	$113.79
Systems Engineer III	$149.47

Labor Category	Price
Technical Editor Level 4 - Master	$90.30
Technical Writer Level 3 - Senior	$86.11
Technician I	$53.04
Technician II	$62.68
Technician III	$72.32
Technology Engineer I	$110.90
Technology Engineer II	$130.19
Technology Engineer III	$163.94
Test Engineer Level 1 - Apprentice	$83.91
Test Engineer Level 2 - Journeyman	$104.90
Test Engineer Level 3 - Senior	$125.87
Training Specialist Level 1 - Apprentice	$73.02
Training Specialist Level 2 - Journeyman	$105.46
Training Specialist Level 3 - Senior	$126.52
Voice/Data Communications Engineer Level 1 - Apprentice	$77.28
Voice/Data Communications Engineer Level 2 - Journeyman	$87.74
Voice/Data Communications Engineer Level 3 - Senior	$112.49
Voice/Data Communications Engineer Level 4 - Master	$152.08
Web Content Analyst Level 4 - Master	$104.90
Web Designer Level 3 - Senior	$82.07

LABOR CATEGORY DESCRIPTIONS

Administration / Clerical Level 1 – Apprentice

Minimum/General Experience: 1 year of related Technical Experience with Associates Degree.

Functional Responsibility: Administration/Clerical (Level 1-Apprentice) (a) Responsible for developing, drafting, writing and editing reports, briefs, proposals, and other documents in support of a client's requirements. (b) Interfaces with personnel to coordinate meetings, maintain logs, records and files, provides end-user support, and performs general administrative duties. (c) Assists in budgetary, billing, and financial management. (d) Responsible for preparing and/or maintaining systems, programming and operations documentation, procedures and methods, including user reference manuals. Knowledge/Skill Description Applies fundamental concepts, processes, practices, and procedures on technical assignments. Performs work that requires practical experience and training. Work is performed under supervision.

Administration / Clerical Level 2 – Journeyman

Minimum/General Experience: 3 years of related Technical Experience with Associates Degree.

Functional Responsibility: Administration/Clerical (Level 2-Journeyman) (a) Responsible for developing, drafting, writing and editing reports, briefs, proposals, and other documents in support of a client's requirements. (b) Interfaces with personnel to coordinate meetings, maintain logs, records and files, provides end-user support, and performs general administrative duties. (c) Assists in budgetary, billing, and financial management. (d) Responsible for preparing and/or maintaining systems, programming and operations documentation, procedures and methods, including user reference manuals. Knowledge/Skill Description Possesses and applies expertise on multiple complex work assignments. Assignments may be broad in nature, requiring originality and innovation in determining how to accomplish tasks. Operates with appreciable latitude in developing methodology and presenting solutions to problems. Contributes to deliverables and performance metrics where applicable.

Administration / Clerical Level 3 – Senior

Minimum/General Experience: Bachelors Degree and 3 years of related Technical Experience.

Functional Responsibility: Administration/Clerical (Level 3-Senior) (a) Responsible for developing, drafting, writing and editing reports, briefs, proposals, and other documents in support of a client's requirements. (b) Interfaces with personnel to coordinate meetings, maintain logs, records and files, provides end-user support, and performs general administrative duties. (c) Assists in budgetary, billing, and financial management. (d) Responsible for preparing and/or maintaining systems, programming and operations documentation, procedures and methods, including user reference manuals. Knowledge/Skill Description Possesses and applies a comprehensive knowledge across key tasks and high impact assignments. Plans and leads major technology assignments. Evaluates performance results and recommends major changes affecting short-term project growth and success. Functions as a technical expert across multiple project assignments. May supervise others.

Analyst I

Minimum/General Experience: 1 Year of related Technical Experience with Associates Degree

Functional Responsibility: Works with multiple IT departments/sources to research, collect, identify and report software or system requirements using interviews, document analysis, requirements workshops, surveys, site visits, business process descriptions, use cases, scenarios, business analysis, task and workflow analysis. Critically evaluates information gathered, reconcile conflicts; decomposes high-level information into detail functional and development or system requirements. Assist IT project managers with project plan, version scopes and timelines Work with development or systems team to implement requirements related to IT projects. Can solve simple problems, and most often will require direct supervision provided by more experienced personnel.

Analyst II

Minimum/General Experience: 3 Years of related Technical Experience with Associates Degree.

Functional Responsibility: Works with multiple IT departments/sources to research, collect, identify and report software or system requirements using interviews, document analysis, requirements workshops, surveys, site visits, business process descriptions, use cases, scenarios, business analysis, task and workflow analysis. Critically evaluates information gathered, reconcile conflicts; decomposes high-level information into detail functional and development or system

requirements. Assist IT project managers with project plan, version scopes and timelines Work with development or systems team to implement requirements related to IT projects. Can solve more complex problems with minimal supervision.

Analyst III

Minimum/General Experience: 3 Years of related Technical Experience with Bachelors Degree.

Functional Responsibility: Works with multiple IT departments/sources to research, collect, identify and report software or system requirements using interviews, document analysis, requirements workshops, surveys, site visits, business process descriptions, use cases, scenarios, business analysis, task and workflow analysis. Critically evaluates information gathered, reconcile conflicts; decomposes high-level information into detail functional and development or system requirements. Assist IT project managers with project plan, version scopes and timelines Work with development or systems team to implement requirements related to IT projects. Can solve all problems with no supervision required. Shall supervise junior personnel.

Applications Developer Level 1 – Apprentice

Minimum/General Experience: 1 years of related Technical Experience with Associates Degree

Functional Responsibility: Applications Developer (Level 1-Apprentice) (a) Designs, develops, enhances, debugs, and implements software. Troubleshoots production problems related to software applications. (b) Researches, tests, builds, and coordinates the conversion and/or integration of new products based on client requirements. Designs and develops new software products or major enhancements to existing software. (c) Addresses problems of systems integration, compatibility, and multiple platforms. (d) Consults with project teams and end users to identify application requirements. (e) Performs feasibility analysis on potential future projects to management. (f) Assists in the evaluation and recommendation of application software packages, application integration and testing tools. (g) Resolves problems with software and responds to suggestions for improvements and enhancements. (h) Acts as team leader on projects. (i) Instructs, assigns, directs, and checks the work of other software developers on development team. (j) Participates in development of software user manuals. Knowledge/Skill Description Applies fundamental concepts, processes, practices, and procedures on technical assignments. Performs work that requires practical experience and training. Work is performed under supervision.

Applications Developer Level 2 – Journeyman

Minimum/General Experience: Associates Degree and 2-4 years of related Technical Experience.

Functional Responsibility: Applications Developer (Level 2-Journeyman) (a) Designs, develops, enhances, debugs, and implements software. Troubleshoots production problems related to software applications. (b) Researches, tests, builds, and coordinates the conversion and/or integration of new products based on client requirements. Designs and develops new software products or major enhancements to existing software. (c) Addresses problems of systems integration, compatibility, and multiple platforms. (d) Consults with project teams and end users to identify application requirements. (e) Performs feasibility analysis on potential future projects to management. (f) Assists in the evaluation and recommendation of application software packages, application integration and testing tools. (g) Resolves problems with software and

responds to suggestions for improvements and enhancements. (h) Acts as team leader on projects. (i) Instructs, assigns, directs, and checks the work of other software developers on development team. (j) Participates in development of software user manuals. Knowledge/Skill Description Possesses and applies expertise on multiple complex work assignments. Assignments may be broad in nature, requiring originality and innovation in determining how to accomplish tasks. Operates with appreciable latitude in developing methodology and presenting solutions to problems. Contributes to deliverables and performance metrics where applicable.

Applications Developer Level 3 – Senior

Minimum/General Experience: Bachelors Degree and 3-5 years of related Technical Experience.

Functional Responsibility: Applications Developer (Level 3-Senior) (a) Designs, develops, enhances, debugs, and implements software. Troubleshoots production problems related to software applications. (b) Researches, tests, builds, and coordinates the conversion and/or integration of new products based on client requirements. Designs and develops new software products or major enhancements to existing software. (c) Addresses problems of systems integration, compatibility, and multiple platforms. (d) Consults with project teams and end users to identify application requirements. (e) Performs feasibility analysis on potential future projects to management. (f) Assists in the evaluation and recommendation of application software packages, application integration and testing tools. (g) Resolves problems with software and responds to suggestions for improvements and enhancements. (h) Acts as team leader on projects. (i) Instructs, assigns, directs, and checks the work of other software developers on development team. (j) Participates in development of software user manuals. Knowledge/Skill Description Possesses and applies a comprehensive knowledge across key tasks and high impact assignments. Plans and leads major technology assignments. Evaluates performance results and recommends major changes affecting short-term project growth and success. Functions as a technical expert across multiple project assignments. May supervise others.

Applications Developer Level 4 – Master

Minimum/General Experience: Masters Degree and 3-5 years of related Technical Experience.

Functional Responsibility: Applications Developer (Level 4-Master) (a) Designs, develops, enhances, debugs, and implements software. Troubleshoots production problems related to software applications. (b) Researches, tests, builds, and coordinates the conversion and/or integration of new products based on client requirements. Designs and develops new software products or major enhancements to existing software. (c) Addresses problems of systems integration, compatibility, and multiple platforms. (d) Consults with project teams and end users to identify application requirements. (e) Performs feasibility analysis on potential future projects to management. (f) Assists in the evaluation and recommendation of application software packages, application integration and testing tools. (g) Resolves problems with software and responds to suggestions for improvements and enhancements. (h) Acts as team leader on projects. (i) Instructs, assigns, directs, and checks the work of other software developers on development team. (j) Participates in development of software user manuals. Knowledge/Skill Description Provides technical/management leadership on major tasks or technology assignments. Establishes goals and plans that meet project objectives. Has domain and expert technical knowledge. Directs and controls activities for a client, having overall responsibility for financial management, methods, and staffing to ensure that technical requirements are met. Interactions involve client

negotiations and interfacing with senior management. Decision making and domain knowledge may have a critical impact on overall project implementation. May supervise others.

Applications Systems Analyst Level 1 – Apprentice

Minimum/General Experience: 1 year of related Technical Experience with Associates Degree.

Functional Responsibility: Applications Systems Analyst (Level 1-Apprentice) (a) Formulates/defines system scope and objectives. (b) Devises or modifies procedures to solve complex problems considering computer equipment capacity and limitations, operating time, and form of desired results. (c) Prepares detailed specifications for programs. Assists in the design, development, testing, implementation, and documentation of new software and enhancements of existing applications. (d) Works with project managers, developers, and end users to ensure application designs meet business requirements. (e) Formulates/defines specifications for complex operating software programming applications or modifies/maintains complex existing applications using engineering releases and utilities from the manufacturer. (f) Designs, codes, tests, debugs, and documents those programs. (g) Provides overall operating system, such as sophisticated file maintenance routines, large telecommunications networks, computer accounting, and advanced mathematical/scientific software packages. (h) Assists all phases of software systems programming applications. (i) Evaluates new and existing software products. Knowledge/Skill Description Applies fundamental concepts, processes, practices, and procedures on technical assignments. Performs work that requires practical experience and training. Work is performed under supervision.

Applications Systems Analyst Level 2 – Journeyman

Minimum/General Experience: Associates Degree and 2-4 years of related Technical Experience.

Functional Responsibility: Applications Systems Analyst (Level 2-Journeyman) (a) Formulates/defines system scope and objectives. (b) Devises or modifies procedures to solve complex problems considering computer equipment capacity and limitations, operating time, and form of desired results. (c) Prepares detailed specifications for programs. Assists in the design, development, testing, implementation, and documentation of new software and enhancements of existing applications. (d) Works with project managers, developers, and end users to ensure application designs meet business requirements. (e) Formulates/defines specifications for complex operating software programming applications or modifies/maintains complex existing applications using engineering releases and utilities from the manufacturer. (f) Designs, codes, tests, debugs, and documents those programs. (g) Provides overall operating system, such as sophisticated file maintenance routines, large telecommunications networks, computer accounting, and advanced mathematical/scientific software packages. (h) Assists all phases of software systems programming applications. (i) Evaluates new and existing software products. Knowledge/Skill Description Possesses and applies expertise on multiple complex work assignments. Assignments may be broad in nature, requiring originality and innovation in determining how to accomplish tasks. Operates with appreciable latitude in developing methodology and presenting solutions to problems. Contributes to deliverables and performance metrics where applicable.

Applications Systems Analyst Level 3 – Senior

Minimum/General Experience: Bachelors Degree and 3-5 years of related Technical Experience.

Functional Responsibility: Applications Systems Analyst (Level 3-Senior) (a) Formulates/defines system scope and objectives. (b) Devises or modifies procedures to solve complex problems considering computer equipment capacity and limitations, operating time, and form of desired results. (c) Prepares detailed specifications for programs. Assists in the design, development, testing, implementation, and documentation of new software and enhancements of existing applications. (d) Works with project managers, developers, and end users to ensure application designs meet business requirements. (e) Formulates/defines specifications for complex operating software programming applications or modifies/maintains complex existing applications using engineering releases and utilities from the manufacturer. (f) Designs, codes, tests, debugs, and documents those programs. (g) Provides overall operating system, such as sophisticated file maintenance routines, large telecommunications networks, computer accounting, and advanced mathematical/scientific software packages. (h) Assists all phases of software systems programming applications. (i) Evaluates new and existing software products. Knowledge/Skill Description Possesses and applies a comprehensive knowledge across key tasks and high impact assignments. Plans and leads major technology assignments. Evaluates performance results and recommends major changes affecting short-term project growth and success. Functions as a technical expert across multiple project assignments. May supervise others.

Applications Systems Analyst Level 4 – Master

Minimum/General Experience: Masters Degree and 3-5 years of related Technical Experience.

Functional Responsibility: Applications Systems Analyst (Level 4-Master) (a) Formulates/defines system scope and objectives. (b) Devises or modifies procedures to solve complex problems considering computer equipment capacity and limitations, operating time, and form of desired results. (c) Prepares detailed specifications for programs. Assists in the design, development, testing, implementation, and documentation of new software and enhancements of existing applications. (d) Works with project managers, developers, and end users to ensure application designs meet business requirements. (e) Formulates/defines specifications for complex operating software programming applications or modifies/maintains complex existing applications using engineering releases and utilities from the manufacturer. (f) Designs, codes, tests, debugs, and documents those programs. (g) Provides overall operating system, such as sophisticated file maintenance routines, large telecommunications networks, computer accounting, and advanced mathematical/scientific software packages. (h) Assists all phases of software systems programming applications. (i) Evaluates new and existing software products. Knowledge/Skill Description Provides technical/management leadership on major tasks or technology assignments. Establishes goals and plans that meet project objectives. Has domain and expert technical knowledge. Directs and controls activities for a client, having overall responsibility for financial management, methods, and staffing to ensure that technical requirements are met. Interactions involve client negotiations and interfacing with senior management. Decision making and domain knowledge may have a critical impact on overall project implementation. May supervise others.

Business Process Consultant Level 4 – Master

Minimum/General Experience: Masters Degree and 3-5 years of related Technical Experience.

Functional Responsibility: Business Process Consultant (a) Analyzes process and re-engineering, with an understanding of technical problems and solutions as they relate to the current and future business environment. (b) Creates process change by integrating new processes with

existing ones and communicating these changes to impacted Business Systems teams. (c) Recommends and facilitates quality improvement efforts.

Business Systems Analyst Level 4 – Master

Minimum/General Experience: Masters Degree and 3-5 years of related Technical Experience.

Functional Responsibility: Business Systems Analyst (a) Formulates and defines systems scope and objectives based on both user needs and a thorough understanding of business systems and industry requirements. (b) Devises or modifies procedures to solve complex problems considering computer equipment capacity and limitations, operation time, and form of desired results. Includes analysis of business and user needs, documentation of requirements, and translation into proper system requirements specifications. (c) Provides consultation on complex projects and is considered the top-level contributor/specialist of most phases of systems analysis, while considering the business implications of the application of technology to the current and future business environment.

Chief Information Security Officer Level 6 – Executive

Minimum/General Experience: Masters Degree and 5-9 years of related Technical Experience.

Functional Responsibility: Chief Information Security Officer (a) Responsible for determining enterprise information security standards. Develops and implements information security standards and procedures. (b) Provides tactical information security advice and examining the ramifications of new technologies. (c) Ensures that all information systems are functional and secure.

Computer Forensic and Intrusion Analyst Level 4 – Master

Minimum/General Experience: Masters Degree and 3-5 years of related Technical Experience.

Functional Responsibility: Computer Forensic and Intrusion Analyst (a) Provides knowledge in computer and network forensics. (b) Conducts vulnerability assessments/penetration tests of information systems. (c) Develops, researches and maintains proficiency in tools, techniques, countermeasures, and trend in computer and network vulnerabilities, data hiding, and encryption. (d) Identifies, deters, monitors, and investigates computer and network intrusions. (e) Provides computer forensic support to high technology investigations in the form of evidence seizure, computer forensic analysis, and data recovery.

Computer Scientist Level 5 – Director

Minimum/General Experience: Masters Degree and 5-9 years of related Technical Experience.

Functional Responsibility: Computer Scientist (b) Develops, modifies, and applies computer modeling and programming applications to analyze and solve mathematical and scientific problems affecting system and program performance. (c) Participates in all phases of scientific and engineering projects such as research, design, development, testing, modeling, simulating, training, and documentation.

Configuration Management Specialist Level 2 – Journeyman

Minimum/General Experience: Associates Degree and 2-4 years of related Technical Experience.

Functional Responsibility: Configuration Management Specialist (Level 2-Journeyman) (a) Provides configuration management planning. (b) Describes provisions for configuration identification, change control, configuration status accounting, and configuration audits. (c) Regulates the change process so that only approved and validated changes are incorporated into product documents and related software. Knowledge/Skill Description Possesses and applies expertise on multiple complex work assignments. Assignments may be broad in nature, requiring originality and innovation in determining how to accomplish tasks. Operates with appreciable latitude in developing methodology and presenting solutions to problems. Contributes to deliverables and performance metrics where applicable.

Configuration Management Specialist Level 3 – Senior

Minimum/General Experience: Bachelors Degree and 3-5 years of related Technical Experience.

Functional Responsibility: Configuration Management Specialist (Level 3-Senior) (a) Provides configuration management planning. (b) Describes provisions for configuration identification, change control, configuration status accounting, and configuration audits. (c) Regulates the change process so that only approved and validated changes are incorporated into product documents and related software. Knowledge/Skill Description Possesses and applies a comprehensive knowledge across key tasks and high impact assignments. Plans and leads major technology assignments. Evaluates performance results and recommends major changes affecting short-term project growth and success. Functions as a technical expert across multiple project assignments. May supervise others.

Configuration Management Specialist Level 4 – Master

Minimum/General Experience: Masters Degree and 3-5 years of related Technical Experience.

Functional Responsibility: Configuration Management Specialist (Level 4-Master) (a) Provides configuration management planning. (b) Describes provisions for configuration identification, change control, configuration status accounting, and configuration audits. (c) Regulates the change process so that only approved and validated changes are incorporated into product documents and related software. Knowledge/Skill Description Provides technical/management leadership on major tasks or technology assignments. Establishes goals and plans that meet project objectives. Has domain and expert technical knowledge. Directs and controls activities for a client, having overall responsibility for financial management, methods, and staffing to ensure that technical requirements are met. Interactions involve client negotiations and interfacing with senior management. Decision making and domain knowledge may have a critical impact on overall project implementation. May supervise others.

Consultant I

Minimum/General Experience: 1 Year of related Technical Experience with Associates Degree.

Functional Responsibility: Professional providing General IT assistance to help customers achieve a specific solution related to the organization's utilization of information technology products and services. Demonstrates exceptional oral and written communication skills.

Consultant II

Minimum/General Experience: 3 Years of related Technical Experience with Associates Degree.

Functional Responsibility: Professional providing General IT assistance to help customers achieve a specific solution related to the organization's utilization of information technology products and services. Demonstrates exceptional oral and written communication skills.

Consultant III

Minimum/General Experience: 3 Years of related Technical Experience with Bachelors Degree.

Functional Responsibility: Professional providing General IT assistance to help customers achieve a specific solution related to the organization's utilization of information technology products and services. Demonstrates exceptional oral and written communication skills.

Data Architect Level 4 – Master

Minimum/General Experience: Masters Degree and 3-5 years of related Technical Experience.

Functional Responsibility: Data Architect (a) Designs and builds relational databases. Performs data access analysis design, and archive/recovery design and implementation. (b) Develops strategies for data acquisitions, archive recovery, and implementation of a database. (c) Works in a data warehouse environment, which includes data design, database architecture, and metadata repository creation. (d) Translates business needs into long- term architecture solutions. (e) Defines, designs, and builds dimensional databases. (f) Develops data warehousing blueprints, evaluating hardware and software platforms, and integrating systems. (g) Reviews and develops object and data models and the metadata repository to structure the data for better management and quicker access.

Data Warehousing Specialist Level 1 – Apprentice

Minimum/General Experience: 1 year of related Technical Experience with Associates Degree.

Functional Responsibility: Data Warehousing Specialist (Level 1-Apprentice) (a) Coordinates the data administration technical function for both data warehouse development and maintenance. (b) Facilitates change control, problem management, and communication among data architects, programmers, analysts, and engineers. (c) Establishes and enforces processes to ensure a consistent, well managed, and well-integrated data warehouse infrastructure. (d) Analyzes and identifies data and metadata requirements. (e) Defines user requirements and database design specifications. (f) Designs, implements, and supports data warehousing requirements. Implements business rules via stored procedures, middleware, or other technologies. (g) Provides product support and maintenance of the data warehouse. (h) Performs data warehouse design and construction. Knowledge/Skill Description Applies fundamental concepts, processes, practices, and procedures on technical assignments. Performs work that requires practical experience and training. Work is performed under supervision.

Data Warehousing Specialist Level 2 – Journeyman

Minimum/General Experience: Associates Degree and 2-4 years of related Technical Experience.

Functional Responsibility: Data Warehousing Specialist (Level 2-Journeyman) (a) Coordinates the data administration technical function for both data warehouse development and maintenance. (b) Facilitates change control, problem management, and communication among data architects, programmers, analysts, and engineers. (c) Establishes and enforces processes to ensure a consistent, well managed, and well-integrated data warehouse infrastructure. (d) Analyzes and

identifies data and metadata requirements. (e) Defines user requirements and database design specifications. (f) Designs, implements, and supports data warehousing requirements. Implements business rules via stored procedures, middleware, or other technologies. (g) Provides product support and maintenance of the data warehouse. (h) Performs data warehouse design and construction. Knowledge/Skill Description Possesses and applies expertise on multiple complex work assignments. Assignments may be broad in nature, requiring originality and innovation in determining how to accomplish tasks. Operates with appreciable latitude in developing methodology and presenting solutions to problems. Contributes to deliverables and performance metrics where applicable.

Data Warehousing Specialist Level 3 – Senior

Minimum/General Experience: Bachelors Degree and 3-5 years of related Technical Experience.

Functional Responsibility: Data Warehousing Specialist (Level 3-Senior) (a) Coordinates the data administration technical function for both data warehouse development and maintenance. (b) Facilitates change control, problem management, and communication among data architects, programmers, analysts, and engineers. (c) Establishes and enforces processes to ensure a consistent, well managed, and well-integrated data warehouse infrastructure. (d) Analyzes and identifies data and metadata requirements. (e) Defines user requirements and database design specifications. (f) Designs, implements, and supports data warehousing requirements. Implements business rules via stored procedures, middleware, or other technologies. (g) Provides product support and maintenance of the data warehouse. (h) Performs data warehouse design and construction. Knowledge/Skill Description Possesses and applies a comprehensive knowledge across key tasks and high impact assignments. Plans and leads major technology assignments. Evaluates performance results and recommends major changes affecting short-term project growth and success. Functions as a technical expert across multiple project assignments. May supervise others.

Data Warehousing Specialist Level 4 – Master

Minimum/General Experience: Masters Degree and 3-5 years of related Technical Experience.

Functional Responsibility: Data Warehousing Specialist (Level 4-Master) (a) Coordinates the data administration technical function for both data warehouse development and maintenance. (b) Facilitates change control, problem management, and communication among data architects, programmers, analysts, and engineers. (c) Establishes and enforces processes to ensure a consistent, well managed, and well-integrated data warehouse infrastructure. (d) Analyzes and identifies data and metadata requirements. (e) Defines user requirements and database design specifications. (f) Designs, implements, and supports data warehousing requirements. Implements business rules via stored procedures, middleware, or other technologies. (g) Provides product support and maintenance of the data warehouse. (h) Performs data warehouse design and construction. Knowledge/Skill Description Provides technical/management leadership on major tasks or technology assignments. Establishes goals and plans that meet project objectives. Has domain and expert technical knowledge. Directs and controls activities for a client, having overall responsibility for financial management, methods, and staffing to ensure that technical requirements are met. Interactions involve client negotiations and interfacing with senior management. Decision making and domain knowledge may have a critical impact on overall project implementation. May supervise others.

Database Specialist Level 1 – Apprentice

Minimum/General Experience: 1 year of related Technical Experience with Associates Degree.

Functional Responsibility: Database Specialist (Level 1-Apprentice) (a) Provides all activities related to the administration of computerized databases. (b) Projects long-range requirements for database administration and design in conjunction with other managers in the information systems function. (c) Designs, creates, and maintains databases in a client/server environment. (d) Conducts quality control and auditing of databases in a client/server environment to ensure accurate and appropriate use of data. (e) Advises users on access to various client/server databases. (f) Designs, implements, and maintains complex databases with respect to JCL, access methods, access time, device allocation, validation checks, organization, protection and security, documentation, and statistical methods. (g) Applies knowledge and experience with database technologies, development methodologies, and front-end (e.g., COGNOS)/back-end programming languages (e.g., SQL). Performs database programming and supports systems design. (h) Includes maintenance of database dictionaries, overall monitoring of standards and procedures, file design and storage, and integration of systems through database design. Knowledge/Skill Description Applies fundamental concepts, processes, practices, and procedures on technical assignments. Performs work that requires practical experience and training. Work is performed under supervision.

Database Specialist Level 2 – Journeyman

Minimum/General Experience: Associates Degree and 2-4 years of related Technical Experience.

Functional Responsibility: Database Specialist (Level 2-Journeyman) (a) Provides all activities related to the administration of computerized databases. (b) Projects long-range requirements for database administration and design in conjunction with other managers in the information systems function. (c) Designs, creates, and maintains databases in a client/server environment. (d) Conducts quality control and auditing of databases in a client/server environment to ensure accurate and appropriate use of data. (e) Advises users on access to various client/server databases. (f) Designs, implements, and maintains complex databases with respect to JCL, access methods, access time, device allocation, validation checks, organization, protection and security, documentation, and statistical methods. (g) Applies knowledge and experience with database technologies, development methodologies, and front-end (e.g., COGNOS)/back-end programming languages (e.g., SQL). Performs database programming and supports systems design. (h) Includes maintenance of database dictionaries, overall monitoring of standards and procedures, file design and storage, and integration of systems through database design. Knowledge/Skill Description Possesses and applies expertise on multiple complex work assignments. Assignments may be broad in nature, requiring originality and innovation in determining how to accomplish tasks. Operates with appreciable latitude in developing methodology and presenting solutions to problems. Contributes to deliverables and performance metrics where applicable.

Database Specialist Level 3 – Senior

Minimum/General Experience: Bachelors Degree and 3-5 years of related Technical Experience.

Functional Responsibility: Database Specialist (Level 3-Senior) (a) Provides all activities related to the administration of computerized databases. (b) Projects long-range requirements for database administration and design in conjunction with other managers in the information systems function.

(c) Designs, creates, and maintains databases in a client/server environment. (d) Conducts quality control and auditing of databases in a client/server environment to ensure accurate and appropriate use of data. (e) Advises users on access to various client/server databases. (f) Designs, implements, and maintains complex databases with respect to JCL, access methods, access time, device allocation, validation checks, organization, protection and security, documentation, and statistical methods. (g) Applies knowledge and experience with database technologies, development methodologies, and front-end (e.g., COGNOS)/back-end programming languages (e.g., SQL). Performs database programming and supports systems design. (h) Includes maintenance of database dictionaries, overall monitoring of standards and procedures, file design and storage, and integration of systems through database design. Knowledge/Skill Description Possesses and applies a comprehensive knowledge across key tasks and high impact assignments. Plans and leads major technology assignments. Evaluates performance results and recommends major changes affecting short-term project growth and success. Functions as a technical expert across multiple project assignments. May supervise others.

Database Specialist Level 4 – Master

Minimum/General Experience: Masters Degree and 3-5 years of related Technical Experience.

Functional Responsibility: Database Specialist (Level 4-Master) (a) Provides all activities related to the administration of computerized databases. (b) Projects long-range requirements for database administration and design in conjunction with other managers in the information systems function. (c) Designs, creates, and maintains databases in a client/server environment. (d) Conducts quality control and auditing of databases in a client/server environment to ensure accurate and appropriate use of data. (e) Advises users on access to various client/server databases. (f) Designs, implements, and maintains complex databases with respect to JCL, access methods, access time, device allocation, validation checks, organization, protection and security, documentation, and statistical methods. (g) Applies knowledge and experience with database technologies, development methodologies, and front-end (e.g., COGNOS)/back-end programming languages (e.g., SQL). Performs database programming and supports systems design. (h) Includes maintenance of database dictionaries, overall monitoring of standards and procedures, file design and storage, and integration of systems through database design. Knowledge/Skill Description Provides technical/management leadership on major tasks or technology assignments. Establishes goals and plans that meet project objectives. Has domain and expert technical knowledge. Directs and controls activities for a client, having overall responsibility for financial management, methods, and staffing to ensure that technical requirements are met. Interactions involve client negotiations and interfacing with senior management. Decision making and domain knowledge may have a critical impact on overall project implementation. May supervise others.

Disaster Recovery Specialist Level 2 – Journeyman

Minimum/General Experience: Associates Degree and 2-4 years of related Technical Experience.

Functional Responsibility: Disaster Recovery Specialist (Level 2-Journeyman) (a) Designs and administers programs to include policies, standards, guidelines, training programs, and a viable quality assurance process for disaster recovery.(b) Oversees and reviews the testing and implementation of software, data systems, and data networks to ensure that the integrity and security of all electronic data and data systems are adequately protected. (c) Facilitates the

preparation of an organization-wide business resumption plan. (d) Assists in the coordination and establishment of disaster recovery programs and business resumption planning across mainframe and client server platforms. (e) Coordinates and monitors simulation testing across all platforms. (f) Designs and administers programs to include policies, standards, guidelines, training programs, and a viable quality assurance process for disaster recovery. Knowledge/Skill Description Possesses and applies expertise on multiple complex work assignments. Assignments may be broad in nature, requiring originality and innovation in determining how to accomplish tasks. Operates with appreciable latitude in developing methodology and presenting solutions to problems. Contributes to deliverables and performance metrics where applicable.

Disaster Recovery Specialist Level 3 – Senior

Minimum/General Experience: Bachelors Degree and 3-5 years of related Technical Experience.

Functional Responsibility: Disaster Recovery Specialist (Level 3-Senior) (a) Designs and administers programs to include policies, standards, guidelines, training programs, and a viable quality assurance process for disaster recovery.(b) Oversees and reviews the testing and implementation of software, data systems, and data networks to ensure that the integrity and security of all electronic data and data systems are adequately protected. (c) Facilitates the preparation of an organization-wide business resumption plan. (d) Assists in the coordination and establishment of disaster recovery programs and business resumption planning across mainframe and client server platforms. (e) Coordinates and monitors simulation testing across all platforms. (f) Designs and administers programs to include policies, standards, guidelines, training programs, and a viable quality assurance process for disaster recovery. Knowledge/Skill Description Possesses and applies a comprehensive knowledge across key tasks and high impact assignments. Plans and leads major technology assignments. Evaluates performance results and recommends major changes affecting short-term project growth and success. Functions as a technical expert across multiple project assignments. May supervise others.

Enterprise Architect Level 5 – Director

Minimum/General Experience: Masters Degree and 5-9 years of related Technical Experience.

Functional Responsibility: Enterprise Architect (a) Provides high-level architectural expertise to managers and technical staff. (b) Develops architectural products and deliverables for the enterprise and operational business lines. (c) Develops strategy of system and the design infrastructure necessary to support that strategy. (d) Advises on selection of technological purchases with regards to processing, data storage, data access, and applications development. Sets standards for the client/server relational database structure for the organization (SQL, ORACLE, SYBASE, etc.). (e) Advises of feasibility of potential future projects to management.

Enterprise Architect

Minimum/General Experience: 7 Years of related Technical Experience with Bachelors Degree.

Functional Responsibility: Designs and develops complex business solutions using a variety of computer technologies. Independently performs a variety of system design and engineering tasks, which are broad in nature and are concerned with design and implementation of major enterprise systems development and integration, including supporting personnel, hardware, software, and support facilities and/or equipment. Considered a Subject Matter Expert (SME) in one or more specific areas of computer system design and networking.

Applies knowledge of complex concepts and techniques to develop and implement automated solutions to engineering, scientific, or business data acquisition and management problems. Uses scientific and engineering logic to independently identify conceptual or theoretical solutions to problems of technology systems hardware or software design and operation. Evaluates and recommends optimum solutions balancing specific project needs with economic constraints. Formulates architectural design, functional specification, interfaces, and documentation of computer systems considering system interrelationships, operating modes, and equipment configurations. Responsible for developing project plans, justifications, guidelines, and controls.

Enterprise Resource Planning (ERP) Analyst Level 4 – Master

Minimum/General Experience: Masters Degree and 3-5 years of related Technical Experience.

Functional Responsibility: Enterprise Resource Planning (ERP) Analyst (a) Assists with the development and maintenance of the Enterprise Resource Planning (ERP) program. (b) Analyzes and evaluates Enterprise Resource Planning (ERP) application systems. Assists in software upgrades, documentation, and implementation. (c) Customizes and configures workflow to allow the integration of client/server applications. (d) Tests Enterprise Resource Planning (ERP) layout to ensure the system is meeting corporate needs.

Enterprise Resource Planning Business / Architectural Specialist Level 5 – Director

Minimum/General Experience: Masters Degree and 5-9 years of related Technical Experience.

Functional Responsibility: Enterprise Resource Planning Business/Architectural Specialist (a) Adapts functional business requirements and processes to technical solutions based upon comprehensive enterprise application solution sets. (b) Enterprise resource planning and management processes, including but not limited to: knowledge management, investment analysis, data warehousing, ecommerce, return on investment analysis, human resource analysis, material management and logistics, supply chain management, procurement, ordering, manufacturing, decision support, and information dissemination.

Financial Analyst Level 4 – Master

Minimum/General Experience: Bachelors Degree and 3-5 years of related Technical Experience.

Functional Responsibility: Financial Analyst (a) Provides support in the areas of budget, billing, reporting, and financial management for IT initiatives.

Geographic Information System (GIS) Analyst / Programmer Level 4 – Master

Minimum/General Experience: Bachelors Degree and 3-5 years of related Technical Experience.

Functional Responsibility: Geographic Information System (GIS) Analyst/Programmer (a) Demonstrates proficiency in GIS analysis and data modeling. (b) Demonstrates and maintains proficiency with current and developing technologies and software related to geographic analysis. (c) Coordinates, manages, administers, and develops the Geographic Information Systems. (d) Develops various types of GIS maps and related data sets. (e) Designs and implements GIS analytical procedures. (f) Performs analysis and maintenance of GIS systems.

Graphics Specialist Level 3 – Senior

Minimum/General Experience: Bachelors Degree and 3-5 years of related Technical Experience.

Functional Responsibility: Graphics Specialist (a) Produces graphic art and visual materials for promotions, advertisements, films, presentations, packaging, and informative and instructional material through a variety of media outlets such as websites and CD-ROMs. (b) Generates, manipulates, and integrates graphic images, animations, sound, text and video generated with automated tools into consolidated and seamless multimedia programs.

Groupware Specialist Level 3 – Senior

Minimum/General Experience: Bachelors Degree and 3-5 years of related Technical Experience.

Functional Responsibility: Groupware Specialist (a) Provides the implementation, maintenance, and support of company messaging system. (b) Provides technical support on local groupware replication and client dial-up access issues.

Hardware Engineer Level 1 – Apprentice

Minimum/General Experience: 1 year of related Technical Experience with Associates Degree.

Functional Responsibility: Hardware Engineer (Level 1-Apprentice) (a) Provides analysis related to the design, development, and implementation of hardware for products. (b) Develops test strategies, devices, and systems. (c) Performs stress and performance tests on a variety of computer hardware including circuit boards, processors and wiring. Knowledge/Skill Description Applies fundamental concepts, processes, practices, and procedures on technical assignments. Performs work that requires practical experience and training. Work is performed under supervision.

Hardware Engineer Level 2 – Journeyman

Minimum/General Experience: Associates Degree and 2-4 years of related Technical Experience.

Functional Responsibility: Hardware Engineer (Level 2-Journeyman) (a) Provides analysis related to the design, development, and implementation of hardware for products. (b) Develops test strategies, devices, and systems. (c) Performs stress and performance tests on a variety of computer hardware including circuit boards, processors and wiring. Knowledge/Skill Description Possesses and applies expertise on multiple complex work assignments. Assignments may be broad in nature, requiring originality and innovation in determining how to accomplish tasks. Operates with appreciable latitude in developing methodology and presenting solutions to problems. Contributes to deliverables and performance metrics where applicable.

Hardware Engineer Level 3 – Senior

Minimum/General Experience: Bachelors Degree and 3-5 years of related Technical Experience.

Functional Responsibility: Hardware Engineer (Level 3-Senior) (a) Provides analysis related to the design, development, and implementation of hardware for products. (b) Develops test strategies, devices, and systems. (c) Performs stress and performance tests on a variety of computer hardware including circuit boards, processors and wiring. Knowledge/Skill Description Possesses and applies a comprehensive knowledge across key tasks and high impact assignments. Plans and leads major technology assignments. Evaluates performance results and recommends major changes affecting short-term project growth and success. Functions as a technical expert across multiple project assignments. May supervise others.

Hardware Engineer Level 4 – Master

Minimum/General Experience: Masters Degree and 3-5 years of related Technical Experience.

Functional Responsibility: Hardware Engineer (Level 4-Master) (a) Provides analysis related to the design, development, and implementation of hardware for products. (b) Develops test strategies, devices, and systems. (c) Performs stress and performance tests on a variety of computer hardware including circuit boards, processors and wiring. Knowledge/Skill Description Provides technical/management leadership on major tasks or technology assignments. Establishes goals and plans that meet project objectives. Has domain and expert technical knowledge. Directs and controls activities for a client, having overall responsibility for financial management, methods, and staffing to ensure that technical requirements are met. Interactions involve client negotiations and interfacing with senior management. Decision making and domain knowledge may have a critical impact on overall project implementation. May supervise others.

Helpdesk Specialist Level 1 – Apprentice

Minimum/General Experience: 1 year of related Technical Experience with Associates Degree.

Functional Responsibility: Helpdesk Specialist (Level 1-Apprentice) (a) Responds to and diagnoses problems through discussion with users. (b) Ensures a timely process through which problems are controlled. Includes problem recognition, research, isolation, resolution, and follow-up steps. (c) Supervises operation of help desk and serves as focal point for customer concerns. (d) Provides support to end users on a variety of issues. (e) Identifies, researches, and resolves technical problems. (f) Responds to telephone calls, email and personnel requests for technical support. (g) Documents, tracks, and monitors the problem to ensure a timely resolution. (h) Provides second-tier support to end users for either PC, server, or mainframe applications or hardware. (i) Interact with network services, software systems engineering, and/or applications development to restore service and/or identify and correct core problem. (j) Simulates or recreates user problems to resolve operating difficulties. (k) Recommends systems modifications to reduce user problems. Knowledge/Skill Description Applies fundamental concepts, processes, practices, and procedures on technical assignments. Performs work that requires practical experience and training. Work is performed under supervision.

Helpdesk Specialist Level 2 – Journeyman

Minimum/General Experience: Associates Degree and 2-4 years of related Technical Experience.

Functional Responsibility: Helpdesk Specialist (Level 2-Journeyman) (a) Responds to and diagnoses problems through discussion with users. (b) Ensures a timely process through which problems are controlled. Includes problem recognition, research, isolation, resolution, and follow-up steps. (c) Supervises operation of help desk and serves as focal point for customer concerns. (d) Provides support to end users on a variety of issues. (e) Identifies, researches, and resolves technical problems. (f) Responds to telephone calls, email, and personnel requests for technical support. (g) Documents, tracks, and monitors the problem to ensure a timely resolution. (h) Provides second-tier support to end users for either PC, server, or mainframe applications or hardware. (i) Interact with network services, software systems engineering, and/or applications development to restore service and/or identify and correct core problem. (j) Simulates or recreates user problems to resolve operating difficulties. (k) Recommends systems modifications to reduce user problems. Knowledge/Skill Description Possesses and applies expertise on multiple complex

work assignments. Assignments may be broad in nature, requiring originality and innovation in determining how to accomplish tasks. Operates with appreciable latitude in developing methodology and presenting solutions to problems. Contributes to deliverables and performance metrics where applicable.

Helpdesk Specialist Level 3 – Senior

Minimum/General Experience: Bachelors Degree and 3-5 years of related Technical Experience.

Functional Responsibility: Helpdesk Specialist (Level 3-Senior) (a) Responds to and diagnoses problems through discussion with users. (b) Ensures a timely process through which problems are controlled. Includes problem recognition, research, isolation, resolution, and follow-up steps. (c) Supervises operation of help desk and serves as focal point for customer concerns. (d) Provides support to end users on a variety of issues. (e) Identifies, researches, and resolves technical problems. (f) Responds to telephone calls, email, and personnel requests for technical support. (g) Documents, tracks, and monitors the problem to ensure a timely resolution. (h) Provides second-tier support to end users for either PC, server, or mainframe applications or hardware. (i) Interact with network services, software systems engineering, and/or applications development to restore service and/or identify and correct core problem. (j) Simulates or recreates user problems to resolve operating difficulties. (k) Recommends systems modifications to reduce user problems. Knowledge/Skill Description Possesses and applies a comprehensive knowledge across key tasks and high impact assignments. Plans and leads major technology assignments. Evaluates performance results and recommends major changes affecting short-term project growth and success. Functions as a technical expert across multiple project assignments. May supervise others.

Information Assurance / Security Specialist Level 1 – Apprentice

Minimum/General Experience: 1 year of related Technical Experience with Associates Degree.

Functional Responsibility: Information Assurance/Security Specialist (Level 1-Apprentice) (a) Determines enterprise information assurance and security standards. (b) Develops and implements information assurance/security standards and procedures. (c) Coordinates, develops, and evaluates security programs for an organization. Recommends information assurance / security solutions to support customers? Requirements. (d) Identifies, reports, and resolves security violations. (e) Establishes and satisfies information assurance and security requirements based upon the analysis of user, policy, regulatory, and resource demands. (f) Supports customers at the highest levels in the development and implementation of doctrine and policies. (g) Applies know-how to government and commercial common user systems, as well as to dedicated special purpose systems requiring specialized security features and procedures. (h) Performs analysis, design, and development of security features for system architectures. (i) Analyzes and defines security requirements for computer systems, which may include mainframes, workstations, and personal computers. (j) Designs, develops, engineers, and implements solutions that meet security requirements. (k) Provides integration and implementation of the computer system security solution. (l) Analyzes general information assurance-related technical problems and provides basic engineering and technical support in solving these problems. (m) Performs vulnerability/risk analyses of computer systems and applications during all phases of the system development life cycle. (n) Ensures that all information systems are functional and secure. Knowledge/Skill Description Applies fundamental concepts, processes, practices, and procedures on technical

assignments. Performs work that requires practical experience and training. Work is performed under supervision.

Information Assurance / Security Specialist Level 2 – Journeyman

Minimum/General Experience: Associates Degree and 2-4 years of related Technical Experience.

Functional Responsibility: Information Assurance/Security Specialist (Level 2-Journeyman) (a) Determines enterprise information assurance and security standards. (b) Develops and implements information assurance/security standards and procedures. (c) Coordinates, develops, and evaluates security programs for an organization. Recommends information assurance/security solutions to support customers? Requirements. (d) Identifies, reports, and resolves security violations. (e) Establishes and satisfies information assurance and security requirements based upon the analysis of user, policy, regulatory, and resource demands. (f) Supports customers at the highest levels in the development and implementation of doctrine and policies. (g) Applies know-how to government and commercial common user systems, as well as to dedicated special purpose systems requiring specialized security features and procedures. (h) Performs analysis, design, and development of security features for system architectures. (i) Analyzes and defines security requirements for computer systems, which may include mainframes, workstations, and personal computers. (j) Designs, develops, engineers, and implements solutions that meet security requirements. (k) Provides integration and implementation of the computer system security solution. (l) Analyzes general information assurance-related technical problems and provides basic engineering and technical support in solving these problems. (m) Performs vulnerability/risk analyses of computer systems and applications during all phases of the system development life cycle. (n) Ensures that all information systems are functional and secure. Knowledge/Skill Description Possesses and applies expertise on multiple complex work assignments. Assignments may be broad in nature, requiring originality and innovation in determining how to accomplish tasks. Operates with appreciable latitude in developing methodology and presenting solutions to problems. Contributes to deliverables and performance metrics where applicable.

Information Assurance / Security Specialist Level 3 – Senior

Minimum/General Experience: Bachelors Degree and 3-5 years of related Technical Experience.

Functional Responsibility: Information Assurance/Security Specialist (Level 3-Senior) (a) Determines enterprise information assurance and security standards. (b) Develops and implements information assurance/security standards and procedures. (c) Coordinates, develops, and evaluates security programs for an organization. Recommends information assurance/security solutions to support customers? Requirements. (d) Identifies, reports, and resolves security violations. (e) Establishes and satisfies information assurance and security requirements based upon the analysis of user, policy, regulatory, and resource demands. (f) Supports customers at the highest levels in the development and implementation of doctrine and policies. (g) Applies know-how to government and commercial common user systems, as well as to dedicated special purpose systems requiring specialized security features and procedures. (h) Performs analysis, design, and development of security features for system architectures. (i) Analyzes and defines security requirements for computer systems, which may include mainframes, workstations, and personal computers. (j) Designs, develops, engineers, and implements solutions that meet security requirements. (k) Provides integration and implementation of the computer system security

solution. (l) Analyzes general information assurance-related technical problems and provides basic engineering and technical support in solving these problems. (m) Performs vulnerability/risk analyses of computer systems and applications during all phases of the system development life cycle. (n) Ensures that all information systems are functional and secure. Knowledge/Skill Description Possesses and applies a comprehensive knowledge across key tasks and high impact assignments. Plans and leads major technology assignments. Evaluates performance results and recommends major changes affecting short-term project growth and success. Functions as a technical expert across multiple project assignments. May supervise others.

Information Assurance / Security Specialist Level 4 – Master

Minimum/General Experience: Masters Degree and 3-5 years of related Technical Experience.

Functional Responsibility: Information Assurance/Security Specialist (Level 4-Master) (a) Determines enterprise information assurance and security standards. (b) Develops and implements information assurance/security standards and procedures. (c) Coordinates, develops, and evaluates security programs for an organization. Recommends information assurance/security solutions to support customers? Requirements. (d) Identifies, reports, and resolves security violations. (e) Establishes and satisfies information assurance and security requirements based upon the analysis of user, policy, regulatory, and resource demands. (f) Supports customers at the highest levels in the development and implementation of doctrine and policies. (g) Applies know-how to government and commercial common user systems, as well as to dedicated special purpose systems requiring specialized security features and procedures. (h) Performs analysis, design, and development of security features for system architectures. (i) Analyzes and defines security requirements for computer systems, which may include mainframes, workstations, and personal computers. (j) Designs, develops, engineers, and implements solutions that meet security requirements. (k) Provides integration and implementation of the computer system security solution. (l) Analyzes general information assurance-related technical problems and provides basic engineering and technical support in solving these problems. (m) Performs vulnerability/risk analyses of computer systems and applications during all phases of the system development life cycle. (n) Ensures that all information systems are functional and secure. Knowledge/Skill Description Provides technical/management leadership on major tasks or technology assignments. Establishes goals and plans that meet project objectives. Has domain and expert technical knowledge. Directs and controls activities for a client, having overall responsibility for financial management, methods, and staffing to ensure that technical requirements are met. Interactions involve client negotiations and interfacing with senior management. Decision making and domain knowledge may have a critical impact on overall project implementation. May supervise others.

Information Specialist / Knowledge Engineer Level 3 – Senior

Minimum/General Experience: Bachelors Degree and 3-5 years of related Technical Experience.

Functional Responsibility: Information Specialist/Knowledge Engineer (a) Develops information retrieval solutions to support client requirements for specified domain subjects, using information retrieval software languages and automated text analysis and extraction techniques.

Modeling and Simulation Specialist Level 3 – Senior

Minimum/General Experience: Bachelors Degree and 3-5 years of related Technical Experience.

Functional Responsibility: Modeling and Simulation Specialist (a) Specialist in modeling and simulation functions or operations such as, but not limited to exercises, plans, coordination, demonstrations, and instruction in the fields such as, but not limited to health, environmental, transportation, law enforcement, and security for military, and civil agencies. (b) Supports live, constructive, or virtual training.

Network Engineer I

Minimum/General Experience: Associates Degree and 1 year of related Technical Experience.

Functional Responsibility: Manages an engineering group responsible for telecommunications, networks, and other IT disciplines. Applies extremely complex networking concepts in the analysis, study, and design of data networks. 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 and supervises installations, transitions, and cutovers of network components and capabilities. Reviews existing network designs and capabilities with the goal of making refinements, reducing operating overhead, enhancing network throughput, and improving current network topologies. Generally, works under supervision of others.

Network Engineer II

Minimum/General Experience: 3 Years of related Technical Experience with Associates Degree.

Functional Responsibility: Manages an engineering group responsible for telecommunications, networks, and other IT disciplines. Applies extremely complex networking concepts in the analysis, study, and design of data networks. 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 and supervises installations, transitions, and cutovers of network components and capabilities. Reviews existing network designs and capabilities with the goal of making refinements, reducing operating overhead, enhancing network throughput, and improving current network topologies. Can perform more complex tasks with minimal supervision.

Network Engineer III

Minimum/General Experience: 3 Years of related Technical Experience with Bachelors Degree.

Functional Responsibility: Manages an engineering group responsible for telecommunications, networks, and other IT disciplines. Applies extremely complex networking concepts in the analysis, study, and design of data networks. 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 and supervises installations, transitions, and cutovers of network components and capabilities. Reviews existing network designs and capabilities with the goal of making refinements, reducing operating overhead, enhancing network throughput, and improving current network topologies. Can perform all tasks with no supervision required. Shall supervise junior personnel.

Network Specialist Level 1 – Apprentice

Minimum/General Experience: Associates Degree and 1 year of related Technical Experience.

Functional Responsibility: Network Specialist (Level 1-Apprentice) (a) Provides technical guidance for directing and monitoring information systems operations. Designs, builds, and implements network systems. (b) Directs compilation of records and reports concerning network operations and maintenance. Troubleshoots network performance issues. Analyzes network traffic and provides capacity-planning solutions. (c) Monitors and responds to complex technical control facility hardware and software problems. Interfaces with vendor support service groups to ensure proper escalation during outages or periods of degraded system performance. (d) Manages the purchase, testing, installation, and support of network communications, including LAN/MAN/WAN systems. (e) Performs system-level design and configuration of products including determination of hardware, OS, and other platform specifications. (f) Plans large-scale systems projects through vendor comparison and cost studies. (g) Performs a variety of systems engineering tasks and activities that are broad in nature and are concerned with major systems design, integration, and implementation, including personnel, hardware, software, budgetary, and support facilities and/or equipment. (h) Provides quality assurance review and the evaluation of new and existing software products. (i) Provides assistance and oversight for all information systems operations activities, including computer and telecommunications/communications operations, data entry, data control, LAN/MAN/WAN administration and operations support, operating systems programming, system security policy procedures, and/or web strategy and operations. (j) Provides input to policy level discussions regarding standards and budget constraints. (k) Supervises all personnel engaged in the operation and support of network facilities, including all communications equipment on various platforms in large scale or multi-shift operations. (l) Supervises complex operations that involve two or more additional functions such as, but not limited to, network operations, systems security, systems software support, and production support activities. (m) Monitors and responds to hardware, software, and network problems. (n) Provides the routine testing and analysis of all elements of the network facilities (including power, software, communications machinery, lines, modems, and terminals). (o) Utilizes software and hardware tools and identifies and diagnoses complex problems and factors affecting network performance. (p) Troubleshoots network systems when necessary and makes improvements to the network Knowledge/Skill Description Applies fundamental concepts, processes, practices, and procedures on technical assignments. Performs work that requires practical experience and training. Work is performed under supervision.

Network Specialist Level 2 – Journeyman

Minimum/General Experience: Associates Degree with 2-4 years of related Technical Experience.

Functional Responsibility: Network Specialist (Level 2-Journeyman) (a) Provides technical guidance for directing and monitoring information systems operations. Designs, builds, and implements network systems. (b) Directs compilation of records and reports concerning network operations and maintenance. Troubleshoots network performance issues. Analyzes network traffic and provides capacity-planning solutions. (c) Monitors and responds to complex technical control facility hardware and software problems. Interfaces with vendor support service groups to ensure proper escalation during outages or periods of degraded system performance. (d) Manages the purchase, testing, installation, and support of network communications, including LAN/MAN/WAN systems. (e) Performs system-level design and configuration of products including determination of hardware, OS, and other platform specifications. (f) Plans large-scale systems projects through vendor comparison and cost studies. (g) Performs a variety of systems

engineering tasks and activities that are broad in nature and are concerned with major systems design, integration, and implementation, including personnel, hardware, software, budgetary, and support facilities and/or equipment. (h) Provides quality assurance review and the evaluation of new and existing software products. (i) Provides assistance and oversight for all information systems operations activities, including computer and telecommunications/communications operations, data entry, data control, LAN/MAN/WAN administration and operations support, operating systems programming, system security policy procedures, and/or web strategy and operations. (j) Provides input to policy level discussions regarding standards and budget constraints. (k) Supervises all personnel engaged in the operation and support of network facilities, including all communications equipment on various platforms in large scale or multi- shift operations. (l) Supervises complex operations that involve two or more additional functions such as, but not limited to, network operations, systems security, systems software support, and production support activities. (m) Monitors and responds to hardware, software, and network problems. (n) Provides the routine testing and analysis of all elements of the network facilities (including power, software, communications machinery, lines, modems, and terminals). (o) Utilizes software and hardware tools and identifies and diagnoses complex problems and factors affecting network performance. (p) Troubleshoots network systems when necessary and makes improvements to the network Knowledge/Skill Description Possesses and applies expertise on multiple complex work assignments. Assignments may be broad in nature, requiring originality and innovation in determining how to accomplish tasks. Operates with appreciable latitude in developing methodology and presenting solutions to problems. Contributes to deliverables and performance metrics where applicable.

Network Specialist Level 3 – Senior

Minimum/General Experience: Bachelors Degree with 3-5 years of related Technical Experience.

Functional Responsibility: Network Specialist (Level 3-Senior) (a) Provides technical guidance for directing and monitoring information systems operations. Designs, builds, and implements network systems. (b) Directs compilation of records and reports concerning network operations and maintenance. Troubleshoots network performance issues. Analyzes network traffic and provides capacity planning solutions. (c) Monitors and responds to complex technical control facility hardware and software problems. Interfaces with vendor support service groups to ensure proper escalation during outages or periods of degraded system performance. (d) Manages the purchase, testing, installation, and support of network communications, including LAN/MAN/WAN systems. (e) Performs system- level design and configuration of products including determination of hardware, OS, and other platform specifications. (f) Plans large-scale systems projects through vendor comparison and cost studies. (g) Performs a variety of systems engineering tasks and activities that are broad in nature and are concerned with major systems design, integration, and implementation, including personnel, hardware, software, budgetary, and support facilities and/or equipment. (h) Provides quality assurance review and the evaluation of new and existing software products. (i) Provides assistance and oversight for all information systems operations activities, including computer and telecommunications/communications operations, data entry, data control, LAN/MAN/WAN administration and operations support, operating systems programming, system security policy procedures, and/or web strategy and operations. (j) Provides input to policy level discussions regarding standards and budget constraints. (k) Supervises all personnel engaged in the operation and support of network facilities,

including all communications equipment on various platforms in large scale or multi- shift operations. (l) Supervises complex operations that involve two or more additional functions such as, but not limited to, network operations, systems security, systems software support, and production support activities. (m) Monitors and responds to hardware, software, and network problems. (n) Provides the routine testing and analysis of all elements of the network facilities (including power, software, communications machinery, lines, modems, and terminals). (o) Utilizes software and hardware tools and identifies and diagnoses complex problems and factors affecting network performance. (p) Troubleshoots network systems when necessary and makes improvements to the network Knowledge/Skill Description Possesses and applies a comprehensive knowledge across key tasks and high impact assignments. Plans and leads major technology assignments. Evaluates performance results and recommends major changes affecting short-term project growth and success. Functions as a technical expert across multiple project assignments. May supervise others.

Network Specialist Level 4 – Master

Minimum/General Experience: Masters Degree with 3-5 years of related Technical Experience.

Functional Responsibility: Network Specialist (Level 4-Master) (a) Provides technical guidance for directing and monitoring information systems operations. Designs, builds, and implements network systems. (b) Directs compilation of records and reports concerning network operations and maintenance. Troubleshoots network performance issues. Analyzes network traffic and provides capacity planning solutions. (c) Monitors and responds to complex technical control facility hardware and software problems. Interfaces with vendor support service groups to ensure proper escalation during outages or periods of degraded system performance. (d) Manages the purchase, testing, installation, and support of network communications, including LAN/MAN/WAN systems. (e) Performs system-level design and configuration of products including determination of hardware, OS, and other platform specifications. (f) Plans large-scale systems projects through vendor comparison and cost studies. (g) Performs a variety of systems engineering tasks and activities that are broad in nature and are concerned with major systems design, integration, and implementation, including personnel, hardware, software, budgetary, and support facilities and/or equipment. (h) Provides quality assurance review and the evaluation of new and existing software products. (i) Provides assistance and oversight for all information systems operations activities, including computer and telecommunications/communications operations, data entry, data control, LAN/MAN/WAN administration and operations support, operating systems programming, system security policy procedures, and/or web strategy and operations. (j) Provides input to policy level discussions regarding standards and budget constraints. (k) Supervises all personnel engaged in the operation and support of network facilities, including all communications equipment on various platforms in large scale or multi-shift operations. (l) Supervises complex operations that involve two or more additional functions such as, but not limited to, network operations, systems security, systems software support, and production support activities. (m) Monitors and responds to hardware, software, and network problems. (n) Provides the routine testing and analysis of all elements of the network facilities (including power, software, communications machinery, lines, modems, and terminals). (o) Utilizes software and hardware tools and identifies and diagnoses complex problems and factors affecting network performance. (p) Troubleshoots network systems when necessary and makes improvements to the network Knowledge/Skill Description Provides technical/management leadership on major tasks or technology assignments. Establishes goals and plans that meet project

objectives. Has domain and expert technical knowledge. Directs and controls activities for a client, having overall responsibility for financial management, methods, and staffing to ensure that technical requirements are met. Interactions involve client negotiations and interfacing with senior management. Decision making and domain knowledge may have a critical impact on overall project implementation. May supervise others.

Program Manager Level 4 – Master

Minimum/General Experience: Masters Degree with 3-5 years of related Technical Experience.

Functional Responsibility: Program Manager (a) Organizes, directs, and manages contract operation support functions, involving multiple, and complex and inter-related project tasks. (b) Manages teams of contract support personnel at multiple locations. (c) Maintains and manages the client interface at the senior levels of the client organization. (d) Meets with customer and contractor personnel to formulate and review task plans and deliverable items. Ensures conformance with program task schedules and costs.

Program Manager I

Minimum/General Experience: Associates Degree and 1 year of related Technical Experience.

Functional Responsibility: Provides program management for multiple projects. Prepares project implementation plan, coordinates project activities, monitors project milestones, and provides progress reports. Responsible for all aspects of performance (i.e., technical, contractual, administrative, financial). Consults with the customer to ensure adherence to contractual obligations establishes and maintains technical and financial reports to show progress of projects to management and customers, organizes and assigns responsibilities to subordinates, and oversees the completion of all assigned tasks. Performs overall management of contract support operations, possibly involving multiple projects and groups of personnel at multiple locations. Organizes, directs, and coordinates the planning and production of all contract support activities. Able to manage smaller programs with minimal supervision.

Program Manager II

Minimum/General Experience: 3 Years of related Technical Experience with Associates Degree.

Functional Responsibility: Provides program management for multiple projects. Prepares project implementation plan, coordinates project activities, monitors project milestones, and provides progress reports. Responsible for all aspects of performance (i.e., technical, contractual, administrative, financial). Consults with the customer to ensure adherence to contractual obligations establishes and maintains technical and financial reports to show progress of projects to management and customers, organizes and assigns responsibilities to subordinates, and oversees the completion of all assigned tasks Performs overall management of contract support operations, possibly involving multiple projects and groups of personnel at multiple locations. Organizes, directs, and coordinates the planning and production of all contract support activities. Able to manage all programs with no supervision required.

Project Manager I

Minimum/General Experience: 1 Year of related Technical Experience with Associates Degree.

Functional Responsibility: Responsible for assisting the management of small to med- sized projects. Assists in preparing implementation plan, coordinates activities, monitors milestones, and provides progress reports. Creation and management of project information related to contractual requirements and cost for submittal to the program manager for review and approval. Must have rudimentary understanding of accounting, management, and contract principles. Performs day-to-day management of assigned delivery order projects that involve teams of data processing and other information system and management professionals who have previously been involved in analyzing, designing, integrating, testing, documenting, converting, extending, and implementing automated information and telecommunications systems. Demonstrates proven skills in those technical areas addressed by the delivery order to be managed. Organizes, directs, and coordinates the planning and production of all activities associated with assigned delivery order projects. Demonstrates writing and oral communication skills. May defer more complex problems to more senior project managers.

Project Manager II

Minimum/General Experience: 3 Years of related Technical Experience with Associates Degree.

Functional Responsibility: Responsible for assisting the management of small to med- sized projects. Assists in preparing implementation plan, coordinates activities, monitors milestones, and provides progress reports. Creation and management of project information related to contractual requirements and cost for submittal to the program manager for review and approval. Must have rudimentary understanding of accounting, management, and contract principles. Performs day-to-day management of assigned delivery order projects that involve teams of data processing and other information system and management professionals who have previously been involved in analyzing, designing, integrating, testing, documenting, converting, extending, and implementing automated information and telecommunications systems. Demonstrates proven skills in those technical areas addressed by the delivery order to be managed. Organizes, directs, and coordinates the planning and production of all activities associated with assigned delivery order projects. Demonstrates writing and oral communication skills. Able to manage more complex projects with no supervision required.

Project Manager Level 3 – Senior

Minimum/General Experience: Bachelors Degree with 3-5 years of related Technical Experience.

Functional Responsibility: Project Manager (a) Leads team on large projects or significant segment of large complex projects. (b) Analyzes new and complex project related problems and creates innovative solutions involving finance, scheduling, technology, methodology, tools, and solution components. (c) Provides applications systems analysis and programming activities for a Government site, facility or multiple locations. (d) Prepares long and short-range plans for application selection, systems development, systems maintenance, and production activities and for necessary support resources. (e) Oversees all aspects of projects.

Quality Assurance Specialist Level 1 – Apprentice

Minimum/General Experience: Associates Degree and 1 year of related Technical Experience.

Functional Responsibility: Quality Assurance Specialist (Level 1-Apprentice) (a) Provides development of project Software Quality Assurance Plan and the implementation of procedures

that conforms to the requirements of the contract. (b) Provides an independent assessment of how the project's software development process is being implemented relative to the defined process and recommends methods to optimize the organization's process. (c) May be responsible for all activities involving quality assurance and compliance with applicable regulatory requirements. (d) Conducts audits and reviews/analyzes data and documentation. (e) Develops and implements procedures and test plans for assuring quality in a system development environment which supports large databases and applications. Knowledge/Skill Description Applies fundamental concepts, processes, practices, and procedures on technical assignments. Performs work that requires practical experience and training. Work is performed under supervision.

Quality Assurance Specialist Level 2 – Journeyman

Minimum/General Experience: Associates Degree with 2-4 years of related Technical Experience.

Functional Responsibility: Quality Assurance Specialist (Level 2-Journeyman) (a) Provides development of project Software Quality Assurance Plan and the implementation of procedures that conforms to the requirements of the contract. (b) Provides an independent assessment of how the project's software development process is being implemented relative to the defined process and recommends methods to optimize the organization's process. (c) May be responsible for all activities involving quality assurance and compliance with applicable regulatory requirements. (d) Conducts audits and reviews/analyzes data and documentation. (e) Develops and implements procedures and test plans for assuring quality in a system development environment which supports large databases and applications. Knowledge/Skill Description Possesses and applies expertise on multiple complex work assignments. Assignments may be broad in nature, requiring originality and innovation in determining how to accomplish tasks. Operates with appreciable latitude in developing methodology and presenting solutions to problems. Contributes to deliverables and performance metrics where applicable.

Quality Assurance Specialist Level 3 – Senior

Minimum/General Experience: Bachelors Degree with 3-5 years of related Technical Experience.

Functional Responsibility: Quality Assurance Specialist (Level 3-Senior) (a) Provides development of project Software Quality Assurance Plan and the implementation of procedures that conforms to the requirements of the contract. (b) Provides an independent assessment of how the project's software development process is being implemented relative to the defined process and recommends methods to optimize the organization's process. (c) May be responsible for all activities involving quality assurance and compliance with applicable regulatory requirements. (d) Conducts audits and reviews/analyzes data and documentation. (e) Develops and implements procedures and test plans for assuring quality in a system development environment which supports large databases and applications. Knowledge/Skill Description Possesses and applies a comprehensive knowledge across key tasks and high impact assignments. Plans and leads major technology assignments. Evaluates performance results and recommends major changes affecting short-term project growth and success. Functions as a technical expert across multiple project assignments. May supervise others.

Quality Assurance Specialist Level 4 – Master

Minimum/General Experience: Masters Degree with 3-5 years of related Technical Experience.

Functional Responsibility: Quality Assurance Specialist (Level 4-Master) (a) Provides development of project Software Quality Assurance Plan and the implementation of procedures that conforms to the requirements of the contract. (b) Provides an independent assessment of how the project's software development process is being implemented relative to the defined process and recommends methods to optimize the organization's process. (c) May be responsible for all activities involving quality assurance and compliance with applicable regulatory requirements. (d) Conducts audits and reviews/analyzes data and documentation. (e) Develops and implements procedures and test plans for assuring quality in a system development environment which supports large databases and applications. Knowledge/Skill Description Provides technical/management leadership on major tasks or technology assignments. Establishes goals and plans that meet project objectives. Has domain and expert technical knowledge. Directs and controls activities for a client, having overall responsibility for financial management, methods, and staffing to ensure that technical requirements are met. Interactions involve client negotiations and interfacing with senior management. Decision making and domain knowledge may have a critical impact on overall project implementation. May supervise others.

Research Analyst Level 4-Master

Minimum/General Experience: Masters Degree with 3-5 years of related Technical Experience.

Functional Responsibility: Research Analyst (a) Plans, organizes, and conducts research in a variety of areas, such as new or existing products, science, social science, law or business, etc. in support of an IT initiative. (b) Searches sources such as reference works, literature, documents, newspapers, statistical records, and other sources of information. May use Internet, Intranet, magazines, periodicals, journals, and other media to perform research. (c) Analyzes information and statistical data to prepare reports and studies for use by professionals.

Software Engineer I

Minimum/General Experience: Associates Degree and 1 year of related Technical Experience.

Functional Responsibility: Develops and customizes application servers and toolsets to enhance business processes, including workflow development, knowledge, and data management. Research, test and report capabilities of technology products, application server and toolsets, with business analysts to map business and functional requirements. Develops and applies departmental and organization- wide business modernization and process improvements models for use in designing and customizing integrated, shared application servers and knowledge and data management systems. Analyzes and resolves application software and toolset issues. Relies on experience and judgment to plan and accomplish goals. Can solve simple problems, and most often will require direct supervision provided by more experienced personnel.

Software Engineer II

Minimum/General Experience: Associates Degree and 3 years of related Technical Experience.

Functional Responsibility: Develops and customizes application servers and toolsets to enhance business processes, including workflow development, knowledge, and data management. Research, test and report capabilities of technology products, application server and toolsets, with business analysts to map business and functional requirements. Develops and applies departmental and organization-wide business modernization and process improvements models for use in designing and customizing integrated, shared application servers and knowledge and data

management systems. Analyzes and resolves application software and toolset issues. Relies on experience and judgment to plan and accomplish goals. Can complete tasks of intermediate complexity alone and may only require supervision provided by more experienced personnel for more complex problems.

Software Engineer III

Minimum/General Experience: 5 Years of related Technical Experience with Associates Degree.

Functional Responsibility: Develops and customizes application servers and toolsets to enhance business processes, including workflow development, knowledge, and data management. Research, test and report capabilities of technology products, application server and toolsets, with business analysts to map business and functional requirements. Develops and applies departmental and organization-wide business modernization and process improvements models for use in designing and customizing integrated, shared application servers and knowledge and data management systems. Analyzes and resolves application software and toolset issues. Relies on experience and judgment to plan and accomplish goals. Can complete all tasks with no supervision required. Shall supervise junior personnel.

Strategic/Capital Planner Level 5-Director

Minimum/General Experience: Masters Degree with 5-9 years of related Technical Experience.

Functional Responsibility: Strategic/Capital Planner (a) Provides strategic planning of large projects or a significant segment of a strategic planning portion of a large complex project. (b) Provides the overall approach to clarify mission statements so they can be used as springboards in envisioning their desired future. (c) Assists in developing mission and vision statements, subsequent goal delineation, provides guidance for building operational plans and specifying measurable outcomes to include capital outlay planning efforts in a consolidated strategic planning process and prioritizes those initiatives. (d) Assist in preparation of key strategic planning documentation, including OMB Form 300.

Subject Matter Expert I

Minimum/General Experience: Associates Degree and 1 year of related Technical Experience.

Functional Responsibility: Has advanced understanding of area of expertise related to IT disciplines and principles. Advises team members of implication of approaches during solution development. Serves as facilitator for Integrated Product Team meetings. Provides expert consultative support to a functional IT technical area of the project. Develops solutions to complex problems. Works closely with the information technologists to identify the best technological solution to technical issues. Familiar with a specific field's concepts, practices, and procedures. Relies on extensive experience and judgment to plan and accomplish goals. This position will not perform management duties.

Subject Matter Expert II

Minimum/General Experience: 3 Years of related Technical Experience with Associates Degree.

Functional Responsibility: Has advanced understanding of area of expertise related to IT disciplines and principles. Advises team members of implication of approaches during solution development. Serves as facilitator for Integrated Product Team meetings. Provides expert consultative support to a functional IT technical area of the project. Develops solutions to complex

problems. Works closely with the information technologists to identify the best technological solution to technical issues. Familiar with a specific field's concepts, practices, and procedures. Relies on extensive experience and judgment to plan and accomplish goals. This position may perform limited management duties.

Subject Matter Expert III

Minimum/General Experience: 3 Years of related Technical Experience with Bachelors Degree.

Functional Responsibility: Has advanced understanding of area of expertise related to IT disciplines and principles. Advises team members of implication of approaches during solution development. Serves as facilitator for Integrated Product Team meetings. Provides expert consultative support to a functional IT technical area of the project. Develops solutions to complex problems. Works closely with the information technologists to identify the best technological solution to technical issues. Familiar with a specific field's concepts, practices, and procedures. Relies on extensive experience and judgment to plan and accomplish goals. This position will perform managerial duties as requested with minimal support from more experienced personnel.

Subject Matter Expert Level 2-Journeyman

Minimum/General Experience: Associates Degree with 2-4 years of related Technical Experience.

Functional Responsibility: Subject Matter Expert (Level 2-Journeyman) (a) Serves as subject matter expert, possessing in-depth knowledge of a particular area, such as business, computer science, engineering, mathematics, or the various sciences. (b) Provides technical knowledge and analysis of highly specialized applications and operational environments, high-level functional systems analysis, design, integration, documentation, and implementation advice on exceptionally complex problems that need extensive knowledge of the subject matter for effective implementation. (c) Participates as needed in all phases of software development with emphasis on the planning, analysis, testing, integration, documentation, and presentation phases. (d) Applies principles, methods and knowledge of the functional area of capability to specific task order requirements, advanced mathematical principles and methods to exceptionally difficult and narrowly defined technical problems in engineering and other scientific applications to arrive at automated solutions. Knowledge/Skill Description Possesses and applies expertise on multiple complex work assignments. Assignments may be broad in nature, requiring originality and innovation in determining how to accomplish tasks. Operates with appreciable latitude in developing methodology and presenting solutions to problems. Contributes to deliverables and performance metrics where applicable.

Subject Matter Expert Level 3-Senior

Minimum/General Experience: Bachelors Degree with 3-5 years of related Technical Experience.

Functional Responsibility: Subject Matter Expert (Level 3-Senior) (a) Serves as subject matter expert, possessing in-depth knowledge of a particular area, such as business, computer science, engineering, mathematics, or the various sciences. (b) Provides technical knowledge and analysis of highly specialized applications and operational environments, high-level functional systems analysis, design, integration, documentation, and implementation advice on exceptionally complex problems that need extensive knowledge of the subject matter for effective implementation. (c)

Participates as needed in all phases of software development with emphasis on the planning, analysis, testing, integration, documentation, and presentation phases. (d) Applies principles, methods, and knowledge of the functional area of capability to specific task order requirements, advanced mathematical principles and methods to exceptionally difficult and narrowly defined technical problems in engineering and other scientific applications to arrive at automated solutions. Knowledge/Skill Description Possesses and applies a comprehensive knowledge across key tasks and high impact assignments. Plans and leads major technology assignments. Evaluates performance results and recommends major changes affecting short-term project growth and success. Functions as a technical expert across multiple project assignments. May supervise others.

Subject Matter Expert Level 4-Master

Minimum/General Experience: Masters Degree with 3-5 years of related Technical Experience.

Functional Responsibility: Subject Matter Expert (Level 4-Master) (a) Serves as subject matter expert, possessing in-depth knowledge of a particular area, such as business, computer science, engineering, mathematics, or the various sciences. (b) Provides technical knowledge and analysis of highly specialized applications and operational environments, high-level functional systems analysis, design, integration, documentation, and implementation advice on exceptionally complex problems that need extensive knowledge of the subject matter for effective implementation. (c) Participates as needed in all phases of software development with emphasis on the planning, analysis, testing, integration, documentation, and presentation phases. (d) Applies principles, methods, and knowledge of the functional area of capability to specific task order requirements, advanced mathematical principles and methods to exceptionally difficult and narrowly defined technical problems in engineering and other scientific applications to arrive at automated solutions. Knowledge/Skill Description Provides technical/management leadership on major tasks or technology assignments. Establishes goals and plans that meet project objectives. Has domain and expert technical knowledge. Directs and controls activities for a client, having overall responsibility for financial management, methods, and staffing to ensure that technical requirements are met. Interactions involve client negotiations and interfacing with senior management. Decision making and domain knowledge may have a critical impact on overall project implementation. May supervise others.

Systems Administrator I

Minimum/General Experience: 1 Year of related Technical Experience with Associates Degree.

Functional Responsibility: Responsible for the installing, managing, maintaining and troubleshooting hardware and software on systems, to maintain   the on-going operational performance of programs (software) and the hardware on which the programs run within the Mainframe, Mid-Range, or PC environments. Implements and supports local area network (LAN) and Wide area network (WAN) hardware and software. Analyzes customer workflow and procedures to recommend operational support tools and technologies to satisfy customer needs. Acts as a liaison between the customer, suppliers, and other technical groups to resolve network and hardware problems. Analyzes performance problems and recommends solutions to enhance functionality, reliability and/or usability. Implements operational support standards and procedures relating to change management, performance management, and security. Recommends changes and improvements to existing standards. Provides support for the overall IT system

administration activities such as user access, backup and recovery procedures, patches and upgrades, tuning, and performance. Generally, works under supervision.

Systems Administrator II

Minimum/General Experience: 3 Years of related Technical Experience with Associates Degree.

Functional Responsibility: Responsible for the installing, managing, maintaining and troubleshooting hardware and software on systems, to maintain the on-going operational performance of programs (software) and the hardware on which the programs run within the Mainframe, Mid-Range, or PC environments. Implements and supports local area network (LAN) and Wide area network (WAN) hardware and software. Analyzes customer workflow and procedures to recommend operational support tools and technologies to satisfy customer needs. Acts as a liaison between the customer, suppliers, and other technical groups to resolve network and hardware problems. Analyzes performance problems and recommends solutions to enhance functionality, reliability and/or usability. Implements operational support standards and procedures relating to change management, performance management, and security. Recommends changes and improvements to existing standards. Provides support for the overall IT system administration activities such as user access, backup and recovery procedures, patches and upgrades, tuning, and performance. Can perform more complex tasks with minimal supervision.

Systems Administrator III

Minimum/General Experience: 3 Years of related Technical Experience with Bachelors Degree.

Functional Responsibility: Responsible for the installing, managing, maintaining and troubleshooting hardware and software on systems, to maintain the on-going operational performance of programs (software) and the hardware on which the programs run within the Mainframe, Mid-Range, or PC environments. Implements and supports local area network (LAN) and Wide area network (WAN) hardware and software. Analyzes customer workflow and procedures to recommend operational support tools and technologies to satisfy customer needs. Acts as a liaison between the customer, suppliers, and other technical groups to resolve network and hardware problems. Analyzes performance problems and recommends solutions to enhance functionality, reliability and/or usability. Implements operational support standards and procedures relating to change management, performance management, and security. Recommends changes and improvements to existing standards. Provides support for the overall IT system administration activities such as user access, backup and recovery procedures, patches and upgrades, tuning, and performance. Can perform all complex tasks with no supervision required. Shall perform supervisory duties over junior personnel.

Systems Administrator Level 1-Apprentice

Minimum/General Experience: Associates Degree and 1 year of related Technical Experience.

Functional Responsibility: The System Administrator maintains the enterprise's servers and educates all professional staff and operating personnel in the use of the Windows platform, both as a server and a client server operating environment. The System Administrator is responsible for managing the coordination of communication and support between the user community and the technical and operational functions of IT in relationship with all server functions. The System Administrator is a key technical resource for other Senior Staff, providing advice, training, and technical support for various projects. In addition, the System Administrator works closely with

professional technical staff in the IT management team in evaluating current systems and making decisions on future development.

Systems Administrator Level 2-Journeyman

Minimum/General Experience: Associates Degree with 2-4 years of related Technical Experience.

Functional Responsibility: The System Administrator maintains the enterprise's servers and educates all professional staff and operating personnel in the use of the Windows platform, both as a server and a client server operating environment. The System Administrator is responsible for managing the coordination of communication and support between the user community and the technical and operational functions of IT in relationship with all server functions. The System Administrator is a key technical resource for other Senior Staff, providing advice, training, and technical support for various projects. In addition, the System Administrator works closely with professional technical staff in the IT management team in evaluating current systems and making decisions on future development.

Systems Administrator Level 3-Senior

Minimum/General Experience: Bachelors Degree with 3-5 years of related Technical Experience.

Functional Responsibility: The System Administrator Lead is responsible for several System Administrators in directing maintenance of the integrity and security of enterprise's servers and systems, which support the various operating units of the enterprise. The System Administrator - Lead also provides primary direction in developing programs and support systems for all the enterprise's operation units. The System Administrator – Lead directs the conduct of system analysis and development, with limited support and direction from other professional staff, to keep our systems current with changing technologies.

Systems Engineer I

Minimum/General Experience: 1 Year of related Technical Experience with Associates Degree.

Functional Responsibility: (a) Provides analysis related to the design, development, and integration of hardware, software, man-machine interfaces, and all system level requirements to provide an integrated IT solution. (b) Develops integrated system test requirement, strategies, devices, and systems. (c) Directs overall system level testing. Generally, works under supervision.

Systems Engineer II

Minimum/General Experience: 3 Years of related Technical Experience with Associates Degree.

Functional Responsibility: (a) Provides analysis related to the design, development, and integration of hardware, software, man-machine interfaces, and all system level requirements to provide an integrated IT solution. (b) Develops integrated system test requirement, strategies, devices, and systems. (c) Directs overall system level testing. Can perform more complex tasks with minimal supervision.

Systems Engineer III

Minimum/General Experience: 5 Years of related Technical Experience with Associates Degree.

Functional Responsibility: (a) Provides analysis related to the design, development, and integration of hardware, software, man-machine interfaces, and all system level requirements to provide an integrated IT solution. (b) Develops integrated system test requirement, strategies, devices, and systems. (c) Directs overall system level testing. Can perform all complex tasks with no supervision required. Shall perform supervisory duties over junior personnel.

Systems Engineer Level 4-Master

Minimum/General Experience: Masters Degree with 3-5 years of related Technical Experience.

Functional Responsibility: Systems Engineer (a) Provides analysis related to the design, development, and integration of hardware, software, man-machine interfaces, and all system level requirements to provide an integrated IT solution. (b) Develops integrated system test requirement, strategies, devices, and systems. (c) Directs overall system level testing.

Technical Editor Level 4-Master

Minimum/General Experience: Masters Degree with 3-5 years of related Technical Experience.

Functional Responsibility: Technical Editor (a) Reviews content of technical documentation for quality. (b) Produces technical and scientific illustrations for presentations and/or publication, as appropriate to the requirements. (c) Ensures that documents follow the style laid out in the company's style guide.

Technical Writer Level 3-Senior

Minimum/General Experience: Bachelors Degree with 3-5 years of related Technical Experience.

Functional Responsibility: Technical Writer (a) writes a variety of technical articles, reports, brochures, and/or manuals for documentation for a wide range of uses. (b) Coordinates the display of graphics and the production of the document. (c) Ensures content is of high quality and conforms with standards.

Technician I

Minimum/General Experience: 1 Year of related Technical Experience with Associates Degree.

Functional Responsibility: Performs installation of equipment, and system testing and evaluation activities. Inspects and reviews hardware installation, wiring, power, grounding, system database validation, and other activities to ensure quality installation of services. Performs de-installation, and relocation activities including, but not limited to, site preparation and installation and/or removal of cabling and wiring systems, terminal equipment, automated data processing services, hardware and software. Performs under the supervision of others.

Technician II

Minimum/General Experience: 3 Years of related Technical Experience with Associates Degree.

Functional Responsibility: Performs installation of equipment, and system testing and evaluation activities. Inspects and reviews hardware installation, wiring, power, grounding, system database validation, and other activities to ensure quality installation of services. Performs de-installation, and relocation activities including, but not limited to, site preparation and installation and/or removal of cabling and wiring systems, terminal equipment, automated data processing services, hardware and software. Can perform more complex tasks with minimal supervision.

Technician III

Minimum/General Experience: 3 Years of related Technical Experience with Bachelors Degree.

Functional Responsibility: Performs installation of equipment, and system testing and evaluation activities. Inspects and reviews hardware installation, wiring, power, grounding, system database validation, and other activities to ensure quality installation of services. Performs de-installation, and relocation activities including, but not limited to, site preparation and installation and/or removal of cabling and wiring systems, terminal equipment, automated data processing services, hardware and software. Can perform all complex tasks with no supervision required. Shall perform supervisory duties over junior personnel

Technology Engineer I

Minimum/General Experience: 1 Year of related Technical Experience with Associates Degree.

Functional Responsibility: Performs computer engineering and software development. Analyzes business processes, functions, and procedures to develop the best software. Establishes systems specifications and objectives. Participates in systems development and design, including software programming and user interface design. Formulates test plans, coordinates, and performs software testing. Has application knowledge of commonly used concepts, practices and procedures with the information technology fields. Analyzes engineering problems and develops solutions. Makes recommendation after performing system analysis.

Technology Engineer II

Minimum/General Experience: 3 Years of related Technical Experience with Associates Degree.

Functional Responsibility: Performs computer engineering and software development. Leads engineers in the activities of solving computer problems and enabling computer technology to meet the needs of the organization. Assigns, coordinates, and reviews work of engineering personnel. Responsible for applying concepts or modernization, innovation, consolidation, and cost reduction to assigned tasks. A certain degree of creativity and latitude is expected.

Technology Engineer III

Minimum/General Experience: 3 Years of related Technical Experience with Bachelors Degree.

Functional Responsibility: Performs computer engineering and software development. Applies full understanding of computer engineering discipline and industry best practices plus innovation to effectively design, implement, and support software products. Gives technical guidance to other engineers in the team. Analyzes engineering problems and develops innovative solutions. Leads engineers in performing system trade studies to maximize investments in equipment, personnel, and business processes.

Test Engineer Level 1-Apprentice

Minimum/General Experience: Associates Degree and 1 year of related Technical Experience.

Functional Responsibility: Test Engineer (Level 1-Apprentice) (a) Evaluates, recommends, and implements automated test tools and strategies. (b) Designs, implements, and conducts test and evaluation procedures to ensure system requirements are met. (c) Develops, maintains, and upgrades automated test scripts and architectures for application products. Also writes,

implements, and reports status for system test cases for testing. Analyzes test cases and provides regular progress reports. (d) Serves as subject matter specialist providing testing know-how for the support of user requirements of complex to highly complex software/hardware applications. (e) Directs and/or participates in all phases of risk management assessments and software/hardware development with emphasis on analysis of user requirements, test design and test tools selection. Knowledge/Skill Description Applies fundamental concepts, processes, practices, and procedures on technical assignments. Performs work that requires practical experience and training. Work is performed under supervision.

Test Engineer Level 2-Journeyman

Minimum/General Experience: Associates Degree with 2-4 years of related Technical Experience.

Functional Responsibility: Test Engineer (Level 2-Journeyman) (a) Evaluates, recommends, and implements automated test tools and strategies. (b) Designs, implements, and conducts test and evaluation procedures to ensure system requirements are met. (c) Develops, maintains, and upgrades automated test scripts and architectures for application products. Also writes, implements, and reports status for system test cases for testing. Analyzes test cases and provides regular progress reports. (d) Serves as subject matter specialist providing testing know-how for the support of user requirements of complex to highly complex software/hardware applications. (e) Directs and/or participates in all phases of risk management assessments and software/hardware development with emphasis on analysis of user requirements, test design and test tools selection. Knowledge/Skill Description Possesses and applies expertise on multiple complex work assignments. Assignments may be broad in nature, requiring originality and innovation in determining how to accomplish tasks. Operates with appreciable latitude in developing methodology and presenting solutions to problems. Contributes to deliverables and performance metrics where applicable.

Test Engineer 3- Senior

Minimum/General Experience: Bachelors Degree with 3-5 years of related Technical Experience.

Functional Responsibility: Test Engineer (Level 3-Senior) (a) Evaluates, recommends, and implements automated test tools and strategies. (b) Designs, implements, and conducts test and evaluation procedures to ensure system requirements are met. (c) Develops, maintains, and upgrades automated test scripts and architectures for application products. Also writes, implements, and reports status for system test cases for testing. Analyzes test cases and provides regular progress reports. (d) Serves as subject matter specialist providing testing know-how for the support of user requirements of complex to highly complex software/hardware applications. (e) Directs and/or participates in all phases of risk management assessments and software/hardware development with emphasis on analysis of user requirements, test design and test tools selection. Knowledge/Skill Description Possesses and applies a comprehensive knowledge across key tasks and high impact assignments. Plans and leads major technology assignments. Evaluates performance results and recommends major changes affecting short-term project growth and success. Functions as a technical expert across multiple project assignments. May supervise others.

Training Specialist Level 1-Apprentice

Minimum/General Experience: Associates Degree and 1 year of related Technical Experience.

Functional Responsibility: Training Specialist (Level 1-Apprentice) (a) Assesses, designs, and conceptualizes training scenarios, approaches, objectives, plans, tools, aids, curriculums, and other state of the art technologies related to training and behavioral studies. (b) Identifies the best approach training requirements to include, but not limited to hardware, software, simulations, course assessment and refreshment, assessment centers, oral examinations, interviews, computer assisted and adaptive testing, behavior-based assessment and performance, and team and unit assessment and measurement. (c) Develops and revises training courses. Prepares training catalogs and course materials. (d) Trains personnel by conducting formal classroom courses, workshops, and seminars. Knowledge/Skill Description Applies fundamental concepts, processes, practices, and procedures on technical assignments. Performs work that requires practical experience and training. Work is performed under supervision.

Training Specialist Level 2-Journeyman

Minimum/General Experience: Associates Degree with 2-4 years of related Technical Experience.

Functional Responsibility: Training Specialist (Level 2-Journeyman) (a) Assesses, designs, and conceptualizes training scenarios, approaches, objectives, plans, tools, aids, curriculums, and other state of the art technologies related to training and behavioral studies. (b) Identifies the best approach training requirements to include, but not limited to hardware, software, simulations, course assessment and refreshment, assessment centers, oral examinations, interviews, computer assisted and adaptive testing, behavior-based assessment and performance, and team and unit assessment and measurement. (c) Develops and revises training courses. Prepares training catalogs and course materials. (d) Trains personnel by conducting formal classroom courses, workshops, and seminars. Knowledge/Skill Description Possesses and applies expertise on multiple complex work assignments. Assignments may be broad in nature, requiring originality and innovation in determining how to accomplish tasks. Operates with appreciable latitude in developing methodology and presenting solutions to problems. Contributes to deliverables and performance metrics where applicable.

Training Specialist Level 3-Senior

Minimum/General Experience: Bachelors Degree with 3-5 years of related Technical Experience.

Functional Responsibility: Training Specialist (Level 3-Senior) (a) Assesses, designs, and conceptualizes training scenarios, approaches, objectives, plans, tools, aids, curriculums, and other state of the art technologies related to training and behavioral studies. (b) Identifies the best approach training requirements to include, but not limited to hardware, software, simulations, course assessment and refreshment, assessment centers, oral examinations, interviews, computer assisted and adaptive testing, behavior-based assessment and performance, and team and unit assessment and measurement. (c) Develops and revises training courses. Prepares training catalogs and course materials. (d) Trains personnel by conducting formal classroom courses, workshops, and seminars. Knowledge/Skill Description Possesses and applies a comprehensive knowledge across key tasks and high impact assignments. Plans and leads major technology assignments. Evaluates performance results and recommends major changes affecting short-term project growth and success. Functions as a technical expert across multiple project assignments. May supervise others.

Voice/Data Communications Engineer Level 1-Apprentice

Minimum/General Experience: 1-3 years of related Technical Experience.

Functional Responsibility: Voice/Data Communications Engineer (Level 1-Apprentice) (a) Provides technical direction and engineering knowledge for communications activities including planning, designing, developing, testing, installing and maintaining large communications networks. (b) Ensures that adequate and appropriate planning is provided to direct building architects and planners in building communications spaces and media pathways meet industry standards. (c) Develops, operates, and maintains voice, wireless, video, and data communications systems. (d) Provides complex engineering or analytical tasks and activities associated with one or more technical areas within the communications function. Knowledge/Skill Description Applies fundamental concepts, processes, practices, and procedures on technical assignments. Performs work that requires practical experience and training. Work is performed under supervision.

Voice/Data Communications Engineer Level 2-Journeyman

Minimum/General Experience: Associates Degree with 2-4 years of related Technical Experience.

Functional Responsibility: Voice/Data Communications Engineer (Level 2-Journeyman) (a) Provides technical direction and engineering knowledge for communications activities including planning, designing, developing, testing, installing and maintaining large communications networks. (b) Ensures that adequate and appropriate planning is provided to direct building architects and planners in building communications spaces and media pathways meet industry standards. (c) Develops, operates, and maintains voice, wireless, video, and data communications systems. (d) Provides complex engineering or analytical tasks and activities associated with one or more technical areas within the communications function. Knowledge/Skill Description Possesses and applies expertise on multiple complex work assignments. Assignments may be broad in nature, requiring originality and innovation in determining how to accomplish tasks. Operates with appreciable latitude in developing methodology and presenting solutions to problems. Contributes to deliverables and performance metrics where applicable.

Voice/Data Communications Engineer Level 3-Senior

Minimum/General Experience: Bachelors Degree with 3-5 years of related Technical Experience.

Functional Responsibility: Voice/Data Communications Engineer (Level 3-Senior) (a) Provides technical direction and engineering knowledge for communications activities including planning, designing, developing, testing, installing and maintaining large communications networks. (b) Ensures that adequate and appropriate planning is provided to direct building architects and planners in building communications spaces and media pathways meet industry standards. (c) Develops, operates, and maintains voice, wireless, video, and data communications systems. (d) Provides complex engineering or analytical tasks and activities associated with one or more technical areas within the communications function. Knowledge/Skill Description Possesses and applies a comprehensive knowledge across key tasks and high impact assignments. Plans and leads major technology assignments. Evaluates performance results and recommends major changes affecting short-term project growth and success. Functions as a technical expert across multiple project assignments. May supervise others.

Voice/Data Communications Engineer Level 4-Master

Minimum/General Experience: Masters Degree with 3-5 years of related Technical Experience.

Functional Responsibility: Voice/Data Communications Engineer (Level 4-Master) (a) Provides technical direction and engineering knowledge for communications activities including planning, designing, developing, testing, installing and maintaining large communications networks. (b) Ensures that adequate and appropriate planning is provided to direct building architects and planners in building communications spaces and media pathways meet industry standards. (c) Develops, operates, and maintains voice, wireless, video, and data communications systems. (d) Provides complex engineering or analytical tasks and activities associated with one or more technical areas within the communications function. Knowledge/Skill Description Provides technical/management leadership on major tasks or technology assignments. Establishes goals and plans that meet project objectives. Has domain and expert technical knowledge. Directs and controls activities for a client, having overall responsibility for financial management, methods, and staffing to ensure that technical requirements are met. Interactions involve client negotiations and interfacing with senior management. Decision making and domain knowledge may have a critical impact on overall project implementation. May supervise others.

Web Content Analyst Level 4-Master

Minimum/General Experience: Masters Degree with 3-5 years of related Technical Experience.

Functional Responsibility: Web Content Analyst (a) Provides for development and content that will motivate and entertain users so that they regularly access the website and utilize it as a major source for information and decision-making. (b) Provides managing/performing website editorial activities including gathering and researching information that enhances the value of the site.

Web Designer Level 3-Senior

Minimum/General Experience: Bachelors Degree with 3-5 years of related Technical Experience.

Functional Responsibility: Web Designer (a) Designs and builds web pages using a variety of graphics software applications, techniques, and tools. (b) Designs and develops user interface features, site animation, and special-effects elements. Contributes to the design group's efforts to enhance the look and feel of the organization's online offerings. (c) Designs the website to support the organization's strategies and goals relative to external communications.

6. SIN 54151HEAL (HEALTH IT SERVICES)

Labor Category	Price
Health IT Analyst I	$93.45
Health IT Analyst II	$101.31
Health IT Analyst III	$120.99
Health IT Consultant I	$113.12
Health IT Consultant II	$132.79
Health IT Consultant III	$152.46
Health IT Enterprise Architect	$172.14
Health Network Engineer I	$103.28
Health Network Engineer II	$116.07
Health Network Engineer III	$152.46
Health IT Program Manager I	$108.20
Health IT Program Manager II	$128.86
Health IT Project Manager I	$96.40
Health IT Project Manager II	$122.95
Health IT Software Engineer I	$88.52
Health IT Software Engineer II	$105.25
Health IT Software Engineer III	$127.88
Health IT Subject Matter Expert I	$132.79
Health IT Subject Matter Expert II	$162.31
Health IT Subject Matter Expert III	$191.81
Health IT Systems Administrator I	$73.77
Health IT Systems Administrator II	$83.62
Health IT Systems Administrator III	$93.45
Health IT Systems Engineer I	$103.28
Health IT Systems Engineer II	$116.07
Health IT Systems Engineer III	$152.46
Health IT Technician I	$54.10
Health IT Technician II	$63.93
Health IT Technician III	$73.77
Health IT Technology Engineer I	$113.12
Health IT Technology Engineer II	$132.79

Labor Category	Price
Health IT Technology Engineer III	$167.21

LABOR CATEGORY DESCRIPTIONS

Health IT Analyst I

Minimum/General Experience: 1 Year of related Technical Experience with Associates Degree.

Functional Responsibility: Works with multiple Health IT departments/sources to research, collect, identify and report software or system requirements using interviews, document analysis, requirements workshops, surveys, site visits, business process descriptions, use cases, scenarios, business analysis, task and workflow analysis. Critically evaluates Health IT information gathered, reconcile conflicts; decomposes high-level information into detail functional and development or system requirements. Assists Health IT project managers with project plans, version scopes and timelines. Works with Health IT development or systems teams to implement requirements related to Health IT projects. Can solve simple problems, and most often will require direct supervision provided by more experienced personnel.

Health IT Analyst II

Minimum/General Experience: 3 Years of related Technical Experience with Associates Degree.

Functional Responsibility: Works with multiple Health IT departments/sources to research, collect, identify and report software or system requirements using interviews, document analysis, requirements workshops, surveys, site visits, business process descriptions, use cases, scenarios, business analysis, task and workflow analysis. Critically evaluates Health IT information gathered, reconcile conflicts; decomposes high-level information into detail functional and development or system requirements. Assists Health IT project managers with project plans, version scopes and timelines. Works with Health development or systems teams to implement requirements related to Health IT projects. Can solve more complex problems with minimal supervision, development or system requirements.

Health IT Analyst III

Minimum/General Experience: 3 Years of related Technical Experience with Bachelors Degree.

Functional Responsibility: Works with multiple Health IT departments/sources to research, collect, identify and report software or system requirements using interviews, document analysis, requirements workshops, surveys, site visits, business process descriptions, use cases, scenarios, business analysis, task and workflow analysis. Critically evaluates Health IT information gathered, reconcile conflicts; decomposes high-level information into detail functional and development or system requirements. Assists Health IT project managers with project plans, version scopes and timelines. Works with Health development or systems teams to implement requirements related to Health IT projects. Can solve all problems with no supervision required. Shall supervise junior personnel.

Health IT Consultant I

Minimum/General Experience: 1 Year of related Technical Experience with Associates Degree.

Functional Responsibility: Professional providing general Health IT assistance to help customers achieve a specific solution related to the organization's utilization of information technology products and services. Demonstrates exceptional oral and written communication skills.

Health IT Consultant II

Minimum/General Experience: 3 Years of related Technical Experience with Associates Degree.

Functional Responsibility: Professional providing general Health IT assistance to help customers achieve a specific solution related to the organization's utilization of information technology products and services. Demonstrates exceptional oral and written communication skills.

Health IT Consultant III

Minimum/General Experience: 3 Years of related Technical Experience with Bachelors Degree.

Functional Responsibility: Professional providing general Health IT assistance to help customers achieve a specific solution related to the organization's utilization of information technology products and services. Demonstrates exceptional oral and written communication skills.

Health IT Enterprise Architect

Minimum/General Experience: 7 Years of related Technical Experience with Bachelors Degree.

Functional Responsibility: Designs and develops complex business/Health IT solutions using a variety of computer technologies. Independently performs a variety of Health IT system design and engineering tasks which are broad in nature and are concerned with design and implementation of major Health enterprise systems development and integration, including supporting personnel, hardware, software, and support facilities and/or equipment. Considered a Subject Matter Expert (SME) in one or more specific areas of computer system design to include Health IT networking. Applies knowledge of complex concepts and techniques to develop and implement automated solutions to engineering, scientific, or business data acquisition and management problems. Uses scientific and engineering logic to independently identify conceptual or theoretical solutions to problems of technology systems hardware or software design and operation. Evaluates and recommends optimum solutions balancing specific project needs with economic constraints. Formulates architectural design, functional specification, interfaces and documentation of computer systems considering system interrelationships, operating modes, and equipment configurations. Responsible for developing health/Health IT project plans, justifications, guidelines, and controls.

Health IT Network Engineer I

Minimum/General Experience: 1 Year of related Technical Experience with Associates Degree.

Functional Responsibility: Manages an engineering group responsible for telecommunications, networks, and other Health IT disciplines. Applies extremely complex networking concepts in the analysis, study, and design of data networks. 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 and supervises installations, transitions, and cutovers of network

components and capabilities. Reviews existing network designs and capabilities with the goal of making refinements, reducing operating overhead, enhancing network throughput, and improving current Health IT network topologies. Generally, works under supervision of others.

Health IT Network Engineer II

Minimum/General Experience: 3 Years of related Technical Experience with Associates Degree.

Functional Responsibility: Manages an engineering group responsible for telecommunications, networks, and other Health IT disciplines. Applies extremely complex networking concepts in the analysis, study, and design of data networks. 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 and supervises installations, transitions, and cutovers of network components and capabilities. Reviews existing network designs and capabilities with the goal of making refinements, reducing operating overhead, enhancing network throughput, and improving current network topologies. Can perform more complex tasks with minimal supervision.

Health IT Network Engineer III

Minimum/General Experience: 3 Years of related Technical Experience with Bachelors Degree.

Functional Responsibility: Manages an engineering group responsible for telecommunications, networks, and other Health IT disciplines. Applies extremely complex networking concepts in the analysis, study, and design of data networks. 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 and supervises installations, transitions, and cutovers of network components and capabilities. Reviews existing network designs and capabilities with the goal of making refinements, reducing operating overhead, enhancing network throughput, and improving current network topologies. Can perform all tasks with no supervision required. Shall supervise junior personnel.

Health IT Program Manager I

Minimum/General Experience: 1 Year of related Technical Experience with Associates Degree.

Functional Responsibility: Provides program management for multiple Health IT projects. Prepares Health IT project implementation plans, coordinates project activities, monitors project milestones, and provides progress reports. Responsible for all aspects of performance (i.e., technical, contractual, administrative, financial). Consults with the Health IT customer to ensure adherence to contractual obligations, establishes and maintains technical and financial reports to show progress of Health IT projects to management and customers, organizes and assigns responsibilities to subordinates, and oversees the completion of all assigned tasks. Performs overall management of Health IT contract support operations, possibly involving multiple Health IT projects and groups of personnel at multiple locations. Organizes, directs, and coordinates the planning and production of all Health IT contract support activities. Able to manage smaller programs with minimal supervision.

Health IT Program Manager II

Minimum/General Experience: 3 Years of related Technical Experience with Associates Degree.

Functional Responsibility: Provides program management for multiple Health IT projects. Prepares Health IT project implementation plans, coordinates project activities, monitors project milestones, and provides progress reports. Responsible for all aspects of performance (i.e., technical, contractual, administrative, financial). Consults with the Health IT customer to ensure adherence to contractual obligations, establishes and maintains technical and financial reports to show progress of Health IT projects to management and customers, organizes and assigns responsibilities to subordinates, and oversees the completion of all assigned tasks Performs overall management of Health IT contract support operations, possibly involving multiple Health IT projects and groups of personnel at multiple locations. Organizes, directs, and coordinates the planning and production of all Health IT contract support activities. Able to manage larger programs with minimal supervision.

Health IT Project Manager I

Minimum/General Experience: 1 Year of related Technical Experience with Associates Degree.

Functional Responsibility: Responsible for assisting the management of small to med- sized Health IT projects. Assists in preparing Health IT implementation plans, coordinates activities, monitors milestones, and provides progress reports. Creation and management of Health IT project information related to contractual requirements and cost for submittal to the program manager for review and approval. Must have rudimentary understanding of accounting, management, and contract principles. Performs day-to-day management of assigned Health IT delivery order projects that involve teams of data processing and other information system and management professionals who have previously been involved in analyzing, designing, integrating, testing, documenting, converting, extending, and implementing automated information and telecommunications systems. Demonstrates proven skills in those Health IT technical areas addressed by the delivery order to be managed. Organizes, directs, and coordinates the planning and production of all Health IT activities associated with assigned delivery order projects. Demonstrates writing and oral communication skills. May defer more complex problems to more senior project managers.

Health IT Project Manager II

Minimum/General Experience: 3 Years of related Technical Experience with Associates Degree.

Functional Responsibility: Responsible for assisting the management of small to med- sized Health IT projects. Assists in preparing Health IT implementation plan, coordinates activities, monitors milestones, and provides progress reports. Creation and management of Health IT project information related to contractual requirements and cost for submittal to the program manager for review and approval. Must have rudimentary understanding of accounting, management, and contract principles. Performs day-to-day management of assigned Health IT delivery order projects that involve teams of data processing and other information system and management professionals who have previously been involved in analyzing, designing, integrating, testing, documenting, converting, extending, and implementing automated information and telecommunications systems. Demonstrates proven skills in those Health IT technical areas addressed by the delivery order to be managed. Organizes, directs, and coordinates the planning and production of all Health IT activities associated with assigned delivery order projects. Demonstrates writing and oral communication skills. May defer more complex problems to more senior project managers. Able to manage more complex projects with no supervision required.

Health IT Software Engineer I

Minimum/General Experience: 1 Year of related Technical Experience with Associates Degree.

Functional Responsibility: Develops and customizes Health IT application servers and toolsets to enhance business processes, including workflow development, knowledge, and data management. Research, test and report capabilities of technology products, application server and toolsets, with analysts to map requirements.

Develops and applies departmental and organization-wide business modernization and process improvements models for use in designing and customizing integrated, shared application servers and knowledge and Health IT data management systems. Analyzes and resolves application software and toolset issues. Relies on experience and judgment to plan and accomplish goals. Can solve simple problems, and most often will require direct supervision provided by more experienced personnel.

Health IT Software Engineer II

Minimum/General Experience: 3 Years of related Technical Experience with Associates Degree.

Functional Responsibility: Develops and customizes Health IT application servers and toolsets to enhance business processes, including workflow development, knowledge, and data management. Research, test and report capabilities of technology products, application server and toolsets, with business analysts to map business and functional requirements. Develops and applies departmental and organization-wide business modernization and process improvements models for use in designing and customizing integrated, shared application servers and knowledge and Health IT data management systems. Analyzes and resolves application software and toolset issues. Relies on experience and judgment to plan and accomplish goals. Can complete tasks of intermediate complexity alone and may only require supervision provided by more experienced personnel for more complex problems.

Health IT Software Engineer III

Minimum/General Experience: 5 Years of related Technical Experience with Bachelors Degree.

Functional Responsibility: Develops and customizes Health IT application servers and toolsets to enhance business processes, including workflow development, knowledge, and data management. Research, test and report capabilities of technology products, application server and toolsets, with business analysts to map business and functional requirements. Develops and applies departmental and organization-wide business modernization and process improvements models for use in designing and customizing integrated, shared application servers and knowledge and Health IT data management systems. Analyzes and resolves application software and toolset issues. Relies on experience and judgment to plan and accomplish goals. Can complete all tasks with no supervision required. Shall supervise junior personnel.

Health IT Subject Matter Expert I

Minimum/General Experience: 1 Year of related Technical Experience with Associates Degree.

Functional Responsibility: Provides advanced understanding and Health IT expertise related to Health IT disciplines and principles. Advises Health IT team members of implication of approaches during solution development. Serves as Health IT facilitator for Integrated Product Team meetings. Provides expert Health IT consultative support to a functional technical area of

the project. Develops solutions to complex problems. Works closely with the information technologists to identify the best technological solution to technical issues. Familiar with a specific Health field's concepts, practices, and procedures. Relies on extensive experience and judgment to plan and accomplish goals. This position will not perform management duties.

Health IT Subject Matter Expert II

Minimum/General Experience: 3 Years of related Technical Experience with Associates Degree.

Functional Responsibility: Provides advanced understanding and Health IT expertise related to Health IT disciplines and principles. Advises Health IT team members of implication of approaches during solution development. Serves as Health IT facilitator for Integrated Product Team meetings. Provides expert Health IT consultative support to a functional technical area of the project. Develops solutions to complex problems. Works closely with the information technologists to identify the best technological solution to technical issues. Familiar with a specific Health field's concepts, practices, and procedures. Relies on extensive experience and judgment to plan and accomplish goals. This position may perform limited management duties.

Health IT Subject Matter Expert III

Minimum/General Experience: 3 Years of related Technical Experience with Bachelors Degree.

Functional Responsibility: Provides advanced understanding and Health IT expertise related to Health IT disciplines and principles. Advises Health IT team members of implication of approaches during solution development. Serves as Health IT facilitator for Integrated Product Team meetings.

Provides expert Health IT consultative support to a functional technical area of the project. Develops solutions to complex problems. Works closely with the information technologists to identify the best technological solution to technical issues. Familiar with a specific Health field's concepts, practices, and procedures. Relies on extensive experience and judgment to plan and accomplish goals. This position will perform managerial duties as requested with minimal support from more experienced personnel.

Health IT Systems Administrator I

Minimum/General Experience: 1 Year of related Technical Experience with Associates Degree.

Functional Responsibility: Responsible for the installing, managing, maintaining, and troubleshooting of hardware and software on Health IT systems, to maintain the on-going operational performance of programs (software) and the hardware on which the programs run within the Mainframe, Mid-Range, or PC environments. Implements and supports local area network (LAN) and Wide area network (WAN) hardware and software. Analyzes customer workflow and procedures to recommend operational support tools and technologies to satisfy customer needs. Acts as a liaison between the customer, suppliers, and other technical groups to resolve network and hardware problems. Analyzes Health IT performance problems and recommends solutions to enhance functionality, reliability and/or usability. Implements Health operational support standards and procedures relating to change Health IT management, performance management, and security. Recommends changes and improvements to existing standards. Provides support for the overall Health IT system administration activities such as user access, backup and recovery procedures, patches, and upgrades, tuning, and performance. Generally, works under supervision.

Health IT Systems Administrator II

Minimum/General Experience: 3 Years of related Technical Experience with Associates Degree.

Functional Responsibility: Responsible for the installing, managing, maintaining, and troubleshooting hardware and software on Health IT systems, to maintain the on-going operational performance of programs (software) and the hardware on which the programs run within the Mainframe, Mid-Range, or PC environments. Implements and supports local area network (LAN) and Wide area network (WAN) hardware and software. Analyzes customer workflow and procedures to recommend operational support tools and technologies to satisfy customer needs. Acts as a liaison between the customer, suppliers, and other technical groups to resolve Health IT network and hardware problems. Analyzes Health IT performance problems and recommends solutions to enhance functionality, reliability and/or usability. Implements Health operational support standards and procedures relating to change Health IT management, performance management, and security. Recommends changes and improvements to existing standards. Provides support for the overall Health IT system administration activities such as user access, backup and recovery procedures, patches, and upgrades, tuning, and performance. Can perform more complex tasks with minimal supervision.

Health IT Systems Administrator III

Minimum/General Experience: 3 Years of related Technical Experience with Bachelors Degree.

Functional Responsibility: Responsible for the installing, managing, maintaining, and troubleshooting hardware and software on Health IT systems, to maintain the on-going operational performance of programs (software) and the hardware on which the programs run within the Mainframe, Mid-Range, or PC environments. Implements and supports local area network (LAN) and Wide area network (WAN) hardware and software. Analyzes customer workflow and procedures to recommend operational support tools and technologies to satisfy customer needs. Acts as a liaison between the customer, suppliers, and other technical groups to resolve network and hardware problems. Analyzes Health IT performance problems and recommends solutions to enhance functionality, reliability and/or usability. Implements Health operational support standards and procedures relating to change Health IT management, performance management, and security. Recommends changes and improvements to existing standards. Provides support for the overall Health IT system administration activities such as user access, backup and recovery procedures, patches, and upgrades, tuning, and performance. Can perform all complex tasks with no supervision required. Shall perform supervisory duties over junior personnel.

Health IT Systems Engineer I

Minimum/General Experience: 1 Year of related Technical Experience with Associates Degree.

Functional Responsibility: Provides analysis related to the design, development, and integration of hardware, software, man-machine interfaces and all system level requirements to provide an integrated Health IT solution. Develops integrated Health IT system testing requirement, strategies, devices and systems. Directs overall system level testing. Normally works under supervision.

Health IT Systems Engineer II

Minimum/General Experience: 3 Years of related Technical Experience with Associates Degree.

Functional Responsibility: Provides analysis related to the design, development, and integration of hardware, software, man-machine interfaces and all system level requirements to provide an integrated Health IT solution. Develops integrated Health IT system testing requirement, strategies, devices and systems. Directs overall system level testing. Can perform more complex tasks with minimal supervision.

Health IT Systems Engineer III

Minimum/General Experience: 5 Years of related Technical Experience with Bachelors Degree.

Functional Responsibility: Provides analysis related to the design, development, and integration of hardware, software, man-machine interfaces, and all system level requirements to provide an integrated Health IT solution. Develops integrated Health IT system testing requirement, strategies, devices, and systems. Directs overall system level testing. Shall perform supervisory duties over junior personnel.

Health IT Technician I

Minimum/General Experience: 1 Year of related Technical Experience with Associates Degree.

Functional Responsibility: Performs installation of Health IT equipment, and system testing and evaluation activities. Inspects and reviews Health IT hardware installation, wiring, power, grounding, system database validation, and other activities to ensure quality installation of services. Performs de-installation, and relocation activities including, but not limited to, Health IT site preparation and installation and/or removal of cabling and wiring systems, terminal equipment, automated data processing services, hardware, and software. Performs under the supervision of others.

Health IT Technician II

Minimum/General Experience: 3 Years of related Technical Experience with Associates Degree.

Functional Responsibility: Performs installation of Health IT equipment, and system testing and evaluation activities. Inspects and reviews Health IT hardware installation, wiring, power, grounding, system database validation, and other activities to ensure quality installation of services. Performs de-installation, and relocation activities including, but not limited to, Health IT site preparation and installation and/or removal of cabling and wiring systems, terminal equipment, automated data processing services, hardware, and software. Can perform more complex tasks with minimal supervision.

Health IT Technician III

Minimum/General Experience: 3 Years of related Technical Experience with Bachelors Degree.

Functional Responsibility: Performs installation of Health IT equipment, and system testing and evaluation activities. Inspects and reviews Health IT hardware installation, wiring, power, grounding, system database validation, and other activities to ensure quality installation of services. Performs de-installation, and relocation activities including, but not limited to, Health IT site preparation and installation and/or removal of cabling and wiring systems, terminal equipment,

automated data processing services, hardware, and software. Can perform all complex tasks with no supervision required. Shall perform supervisory duties over junior personnel.

Health IT Technology Engineer I

Minimum/General Experience: 1 Year of related Technical Experience with Associates Degree.

Functional Responsibility: Performs computer engineering and software development. Analyzes Health IT business processes, functions, and procedures to develop the best software. Establishes systems specifications and objectives. Participates in Health IT systems development and design, including software programming and user interface design. Formulates test plans and coordinates and performs software testing. Has application knowledge of commonly used concepts, practices and procedures within the Health information technology fields. Analyzes engineering problems and develops solutions. Makes recommendation after performing system analysis.

Health IT Technology Engineer II

Minimum/General Experience: 3 Years of related Technical Experience with Associates Degree.

Functional Responsibility: Performs computer engineering and software development. Leads Health IT engineers in the activities of solving computer problems and enabling computer technology to meet the needs of the organization. Assigns, coordinates, and reviews work of Health IT engineering personnel. Responsible for applying concepts or modernization, innovation, consolidation, and cost reduction to assigned tasks. A certain degree of creativity and latitude is expected.

Health IT Technology Engineer III

Minimum/General Experience: 3 Years of related Technical Experience with Bachelors Degree.

Functional Responsibility: Performs computer engineering and software development. Applies full understanding of computer engineering discipline and Health IT industry best practices plus innovation to effectively design, implement, and support software products. Gives technical guidance to other Health IT engineers on the team. Analyzes engineering problems and develops innovative solutions. Leads engineers in performing Health IT system trade studies to maximize investments in equipment, personnel, and business processes.