



**GENERAL SERVICES ADMINISTRATION
FEDERAL SUPPLY SERVICE
AUTHORIZED FEDERAL SUPPLY SCHEDULE CATALOG/PRICE LIST**

Federal Supply Schedule MAS – General Purpose Commercial Information
Technology Equipment, Software, and Services

Special Item No. 54151S - Information Technology (IT) Professional Services

Contract Number: 47QTC A20D0046

Contract Period: January 7, 2020 through January 6, 2025
Price List through SF1449 Awarded: January 7, 2020

PSC Code D302	SYSTEMS DEVELOPMENT
PSC Code D306	SYSTEMS ANALYSIS
PSC Code D307	IT STRATEGY AND ARCHITECTURE
PSC Code D308	PROGRAMMING
PSC Code D311	DATA CONVERSION SERVICES
PSC Code D316	IT TELECOMMUNICATIONS NETWORK MANAGEMENT SERVICES
PSC Code D317	WEB-BASED SUBSCRIPTION
PSC Code D318	INTEGRATED HARDWARE/SOFTWARE/SERVICES SOLUTIONS, PREDOMINANTLY SERVICES
PSC Code D319	ANNUAL SOFTWARE MAINTENANCE SERVICE PLANS
PSC Code D399	OTHER IT AND TELECOMMUNICATIONS

Contractor:
AceApplications, LLC
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877-499-2231
www.AceApplications.com

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On-line 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 <http://www.gsaadvantage.gov>

SCHEDULE TITLE: Federal Supply Schedule MAS – General Purpose Commercial Information Technology Equipment, Software, and Services

CONTRACT NUMBER: **GS-35F-47QTCA20D0046**

CONTRACT PERIOD: January 7, 2020 through January 6, 2025

For more information on ordering from Federal Supply go to this website: www.gsa.gov/schedules

CONTRACTOR: **AceApplications, LLC**
1802 N. Alafaya Trail, Suite #146
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Phone number: 877-499-2231, ext. 1001
Fax number: (407) 442-2657
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CONTRACTOR’S ADMINISTRATION SOURCE:

<p>[Primary Contact] Courtney Powell, President 1802 N. Alafaya Trail, Suite #146, Orlando, FL 32826 Phone number: 407-499-0022, ext. 1001 Fax number: (407) 442-2657 E-Mail: cpowell@AceApplications.com</p>	<p>[Alternate 1] Laine Powell, Vice President 1802 N. Alafaya Trail, Suite #146, Orlando, FL 32826 Phone number: 407-499-0022, ext. 1002 Fax number: (407) 442-2657 E-Mail: lpowell@AceApplications.com</p>	<p>[Alternate 2] Jerome Williams, Vice President 1802 N. Alafaya Trail, Suite #146, Orlando, FL 32826 Phone number: 407-499-0022, ext. 2 Fax number: (407) 442-2657 E-Mail: jwilliams@AceApplications.com</p>
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BUSINESS SIZE: Small Business, Federal Disadvantaged Business Enterprise (DBE), HubZone, Minority Business Enterprise (MBE)

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

1. SCOPE

- a. The prices, terms and conditions stated under Special Item Number 54151S Information Technology Professional Services apply exclusively to IT/IAM Professional Services within the scope of this Information Technology Schedule.
- b. The Contractor shall provide services at the Contractor's facility and/or at the ordering activity location, as agreed to by the Contractor and the ordering activity.

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

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

3. ORDER

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

4. PERFORMANCE OF SERVICES

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

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

- a. The Contracting Officer may, at any time, by written order to the Contractor, require the Contractor to stop all, or any part, of the work called for by this contract for a period of 90 days after the order is delivered to the Contractor, and for any further period to which the parties may agree. The order shall be specifically identified as a stop-work order issued under this clause. Upon receipt of the order, the Contractor shall immediately comply with its terms and take all reasonable steps to minimize the incurrence of costs allocable to the work covered by the order during the period of work stoppage. Within a period of 90 days after a stop-work is delivered to the Contractor, or within any extension of that period to which the parties shall have agreed, the Contracting Officer shall either-
 1. Cancel the stop-work order; or
 2. Terminate the work covered by the order as provided in the Default, or the Termination for Convenience of the Government, clause of this contract.
- b. If a stop-work order issued under this clause is canceled or the period of the order or any extension thereof expires, the Contractor shall resume work. The Contracting Officer shall make an equitable adjustment in the delivery schedule or contract price, or both, and the contract shall be modified, in writing, accordingly, if-
 1. The stop-work order results in an increase in the time required for, or in the Contractor's cost properly allocable to, the performance of any part of this contract; and
 2. The Contractor asserts its right to the adjustment within 30 days after the end of the period of work stoppage; provided, that, if the Contracting Officer decides the facts justify the action, the Contracting Officer may receive and act upon the claim submitted at any time before final payment under this contract.
- c. If a stop-work order is not canceled and the work covered by the order is terminated for the convenience of the Government, the Contracting Officer shall allow reasonable costs resulting from the stop-work order in arriving at the termination settlement.
- d. If a stop-work order is not canceled and the work covered by the order is terminated for default, the Contracting Officer shall allow, by equitable adjustment or otherwise, reasonable costs resulting from the stop-work order.

6. INSPECTION OF SERVICES

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

7. RESPONSIBILITIES OF THE CONTRACTOR

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

8. RESPONSIBILITIES OF THE ORDERING ACTIVITY

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

9. INDEPENDENT CONTRACTOR

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

10. ORGANIZATIONAL CONFLICTS OF INTEREST

a. Definitions.

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

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

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

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

11. INVOICES

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

12. PAYMENTS

For firm-fixed price orders the ordering activity shall pay the Contractor, upon submission of proper invoices or vouchers, the prices stipulated in this contract for service rendered and accepted. Progress payments shall be made only when authorized by the order. For time-and-

materials orders, the Payments under Time-and-Materials and Labor-Hour Contracts at FAR 52.212-4 (MAR 2009) (ALTERNATE I – OCT 2008) (DEVIATION I – FEB 2007) applies to time-and-materials orders placed under this contract. For labor-hour orders, the Payment under Time-and-Materials and Labor-Hour Contracts at FAR 52.212-4 (MAR 2009) (ALTERNATE I – OCT 2008) (DEVIATION I – FEB 2007) applies to labor-hour orders placed under this contract. 52.216-31(Feb 2007) Time-and Materials/Labor-Hour Proposal Requirements— Commercial Item Acquisition. As prescribed in 16.601(e)(3), insert the following provision:

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

13. RESUMES

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

14. INCIDENTAL SUPPORT COSTS

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

15. APPROVAL OF SUBCONTRACTS

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

16. DESCRIPTION OF IT PROFESSIONAL SERVICES AND PRICING

- a. The Contractor shall provide a description of each type of IT/IAM Service offered under Special Item Numbers 54151S IT/IAM Professional Services should be presented in the same manner as the Contractor sells to its commercial and other ordering activity customers. If the Contractor is proposing hourly rates, a description of all corresponding commercial job titles (labor categories) for those individuals who will perform the service should be provided.

See Appendix B for IT Professional Services Labor Categories

- b. Pricing for all IT/IAM Professional Services shall be in accordance with the Contractor's customary commercial practices; e.g., hourly rates, monthly rates, term rates, and/or fixed prices, minimum general experience and minimum education.

See Appendix A for AceApplications Hourly Labor Billing Rates

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

EXAMPLE: Commercial Job Title: System Engineer

Minimum/General Experience: Three (3) years of technical experience which applies to systems analysis and design techniques for complex computer systems. Requires competence in all phases of systems analysis techniques, concepts and methods; also requires knowledge of available hardware, system software, input/output devices, structure and management practices.

Functional Responsibility: Guides users in formulating requirements, advises alternative approaches, conducts feasibility studies.

Minimum Education: Bachelor's Degree in Computer Science

See Appendix B for IT Professional Services Labor Categories

ORDERING AND PAYMENT INFORMATION:

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

SIN	DESCRIPTION
54151S	Information Technology Professional Services - SUBJECT TO COOPERATIVE PURCHASING. 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.

ADD IF Offered**Cooperative Purchasing (STLOC) and Disaster Recovery (RC) are available

1b. LOWEST PRICED MODEL NUMBER AND PRICE FOR EACH SIN:
(Government net price based on a unit of one)

See Appendix A

1c. HOURLY RATES (Services only):

See Appendix A

2. MAXIMUM ORDER*:

Special Item 54151S - Information Technology (IT) Professional Services
The maximum dollar value per order for all IT Professional services (SIN 54151S) will be \$500,000.

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

3. MINIMUM ORDER: \$100

4. GEOGRAPHIC COVERAGE: Domestic 50 US states; Washington, DC; Puerto Rico.

5. POINT(S) OF PRODUCTION: N/A

6. DISCOUNT FROM LIST PRICES:

GSA Net Prices can be found in Pricing Matrix (Appendix A).

7. QUANTITY DISCOUNT(S):

Additional 1% discount on task order of \$500k or greater amount.

8. PROMPT PAYMENT TERMS: N/A

9.a Government Purchase Cards will be accepted at or below the micro-purchase threshold.

9.b Government Purchase Cards will not be accepted above the micro-purchase threshold. Contact contractor for limit.

10. FOREIGN ITEMS: None

11a. TIME OF DELIVERY: Determined at task order level

11b. EXPEDITED DELIVERY: Determined at task order level

11c. OVERNIGHT AND 2-DAY DELIVERY: Determined at task order level

11d. URGENT REQUIRMENTS: Agencies can contact the Contractor's representative to affect a faster delivery. Customers are encouraged to contact the contractor for the purpose of requesting accelerated delivery.

12. FOB POINT: Destination

13a. ORDERING ADDRESS:

AceApplications, LLC
1802 N. Alafaya Trail, Suite #146
Orlando, FL 32826

13b. ORDERING PROCEDURES: Ordering activities shall use the ordering procedures described in Federal Acquisition Regulation 8.405-3 when placing an order or establishing a BPA for supplies or services. The ordering procedures, information on Blanket Purchase Agreements (BPA's) and a sample BPA can be found at the GSA/FSS Schedule Homepage (fss.gsa.gov/schedules).

14. PAYMENT ADDRESS:

AceApplications, LLC
1802 N. Alafaya Trail, Suite #146
Orlando, FL 32826

15. **WARRANTY PROVISION:** N/A
16. **EXPORT PACKING CHARGES:** N/A
17. **TERMS AND CONDITIONS OF GOVERNMENT PURCHASE CARD ACCEPTANCE:** Government Purchase Cards will be accepted at or below the micro-purchase threshold.
18. **TERMS AND CONDITIONS OF RENTAL, MAINTENANCE, AND REPAIR (IF APPLICABLE):**
N/A
19. **TERMS AND CONDITIONS OF INSTALLATION (IF APPLICABLE):** N/A
20. **TERMS AND CONDITIONS OF REPAIR PARTS INDICATING DATE OF PARTS PRICE LISTS AND ANY DISCOUNTS FROM LIST PRICES (IF AVAILABLE):** N/A
- 20a. **TERMS AND CONDITIONS FOR ANY OTHER SERVICES (IF APPLICABLE):**
Terms and Conditions on page 3.
21. **LIST OF SERVICE AND DISTRIBUTION POINTS (IF APPLICABLE):** N/A
22. **LIST OF PARTICIPATING DEALERS (IF APPLICABLE):** N/A
23. **PREVENTIVE MAINTENANCE (IF APPLICABLE):** N/A
- 24a. **SPECIAL ATTRIBUTES SUCH AS ENVIRONMENTAL ATTRIBUTES (e.g. recycled content, energy efficiency, and/or reduced pollutants):** N/A
- 24b. **Section 508 Compliance for Electronic and Information Technology (EIT):**
Compliant. The EIT standards can be found at: www.Section508.gov.
25. **DUNS NUMBER:** 02-5743530
26. **NOTIFICATION REGARDING REGISTRATION IN SYSTEM FOR AWARD MANAGEMENT (SAM) DATABASE:** Contractor has an Active Registration in the SAM database.

Appendix A.

SIN 54151S – ACEAPPLICATIONS HOURLY LABOR BILLING RATES

SERVICE PROPOSED (e.g. Job Title/Task)	MINIMUM EDUCATION/ CERTIFICATION LEVEL	MINIMUM YEARS OF EXPERIENCE	GSA LABOR SERVICES RATES				
			Y1 1/7/20- 1/6/21	Y2 1/7/21- 1/6/22	Y3 1/7/22- 1/6/23	Y4 1/7/23- 1/6/24	Y5 1/7/24- 1/6/25
<i>IT Architect</i>	<i>Bachelor's Degree</i>	<i>5 years</i>	\$86.45	\$88.18	\$89.94	\$91.74	\$93.58
<i>Senior IT Architect</i>	<i>Bachelor's Degree</i>	<i>7 Years</i>	\$143.37	\$146.23	\$149.16	\$152.14	\$155.18
<i>Applications Programmer /Analyst</i>	<i>Bachelor's Degree</i>	<i>2 years</i>	\$96.51	\$98.44	\$100.41	\$102.42	\$104.47
<i>Senior Applications Programmer/Analyst</i>	<i>Bachelor's Degree</i>	<i>5 years</i>	\$141.49	\$144.32	\$147.21	\$150.15	\$153.15
<i>Applications Architect</i>	<i>Bachelor's Degree</i>	<i>7 years</i>	\$154.61	\$157.70	\$160.86	\$164.07	\$167.35
<i>Manager Applications Development</i>	<i>Bachelor's Degree</i>	<i>10 years</i>	\$159.29	\$162.48	\$165.73	\$169.04	\$172.43
<i>Business Analyst</i>	<i>Bachelor's Degree</i>	<i>4 years</i>	\$99.32	\$101.31	\$103.34	\$105.40	\$107.51
<i>Senior Business Analyst</i>	<i>Bachelor's Degree</i>	<i>8 years</i>	\$143.37	\$146.23	\$149.16	\$152.14	\$155.18
<i>Systems Administrator</i>	<i>Bachelor's Degree</i>	<i>4 years</i>	\$86.21	\$87.93	\$89.69	\$91.48	\$93.31
<i>Senior Systems Administrator</i>	<i>Bachelor's Degree</i>	<i>7 years</i>	\$109.63	\$111.82	\$114.06	\$116.34	\$118.67
<i>Service Desk Representative</i>	<i>Bachelor's Degree</i>	<i>3 years</i>	\$59.97	\$61.17	\$62.39	\$63.64	\$64.91
<i>Senior Service Desk Representative</i>	<i>Bachelor's Degree</i>	<i>5 years</i>	\$74.96	\$76.46	\$77.99	\$79.55	\$81.14
<i>Project Manager</i>	<i>Bachelor's Degree</i>	<i>5 years</i>	\$99.32	\$101.31	\$103.34	\$105.40	\$107.51
<i>Senior Project Manager</i>	<i>Bachelor's Degree</i>	<i>10 years</i>	\$171.48	\$174.91	\$178.40	\$181.97	\$185.61
<i>Program Manager</i>	<i>Bachelor's Degree</i>	<i>10 years</i>	\$163.98	\$167.26	\$170.60	\$174.02	\$177.50
<i>Senior Program Manager</i>	<i>Master's Degree</i>	<i>15 years</i>	\$206.15	\$210.27	\$214.47	\$218.76	\$223.14
<i>Systems Analyst</i>	<i>Bachelor's Degree</i>	<i>3 years</i>	\$93.70	\$95.58	\$97.49	\$99.44	\$101.43
<i>Data Architect</i>	<i>Bachelor's Degree</i>	<i>7 years</i>	\$159.29	\$162.48	\$165.73	\$169.04	\$172.43
<i>Database Analyst</i>	<i>Bachelor's Degree</i>	<i>3 years</i>	\$112.44	\$114.69	\$116.99	\$119.33	\$121.71
<i>Database Administrator</i>	<i>Bachelor's Degree</i>	<i>5 years</i>	\$140.55	\$143.37	\$146.23	\$149.16	\$152.14
<i>Quality Assurance Analyst</i>	<i>Bachelor's Degree</i>	<i>5 years</i>	\$97.45	\$99.40	\$101.39	\$103.42	\$105.48
<i>Customer Support Analyst</i>	<i>Bachelor's Degree</i>	<i>2 years</i>	\$65.59	\$66.90	\$68.24	\$69.61	\$71.00
<i>Network Architect</i>	<i>Bachelor's Degree</i>	<i>7 years</i>	\$206.15	\$210.27	\$214.47	\$218.76	\$223.14
<i>Network Engineer</i>	<i>Bachelor's Degree</i>	<i>5 years</i>	\$117.13	\$119.47	\$121.86	\$124.30	\$126.78
<i>Network Analyst</i>	<i>Bachelor's Degree</i>	<i>3 years</i>	\$110.57	\$112.78	\$115.04	\$117.34	\$119.68
<i>Internet/Web Architect</i>	<i>Bachelor's Degree</i>	<i>5 years</i>	\$149.92	\$152.92	\$155.98	\$159.10	\$162.28

AceApplications Hourly Billing Rates (cont'd)

SERVICE PROPOSED (e.g. Job Title/Task)	MINIMUM EDUCATION/ CERTIFICATION LEVEL	MINIMUM YEARS OF EXPERIENCE	GSA LABOR SERVICES RATES				
			Y1 1/7/20- 1/6/21	Y2 1/7/21- 1/6/22	Y3 1/7/22- 1/6/23	Y4 1/7/23- 1/6/24	Y5 1/7/24- 1/6/25
<i>Web Applications Programmer</i>	<i>Bachelor's Degree</i>	<i>5 years</i>	\$141.49	\$144.32	\$147.21	\$150.15	\$153.15
<i>Web Designer</i>	<i>Bachelor's Degree</i>	<i>3 years</i>	\$96.51	\$98.44	\$100.41	\$102.42	\$104.47
<i>Manager, Telecommunications Operations</i>	<i>Bachelor's Degree</i>	<i>7 years</i>	\$187.41	\$191.15	\$194.98	\$198.88	\$202.85
<i>Telecommunications Engineer</i>	<i>Bachelor's Degree</i>	<i>5 years</i>	\$117.13	\$119.47	\$121.86	\$124.30	\$126.78
<i>Telecommunications Technician</i>	<i>Associate Degree/Certificate</i>	<i>2 years</i>	\$84.33	\$86.02	\$87.74	\$89.49	\$91.28
<i>Business Intelligence Analyst</i>	<i>Bachelor's Degree</i>	<i>7 years</i>	\$154.61	\$157.70	\$160.86	\$164.07	\$167.35
<i>Data Warehouse Analyst</i>	<i>Bachelor's Degree</i>	<i>5 years</i>	\$163.98	\$167.26	\$170.60	\$174.02	\$177.50
<i>Manager, CRM Technology</i>	<i>Bachelor's Degree</i>	<i>10 years</i>	\$168.66	\$172.04	\$175.48	\$178.99	\$182.57
<i>ERP Programmer/Analyst</i>	<i>Bachelor's Degree</i>	<i>5 years</i>	\$149.92	\$152.92	\$155.98	\$159.10	\$162.28
<i>ERP System Administrator</i>	<i>Bachelor's Degree</i>	<i>5 years</i>	\$154.61	\$157.70	\$160.86	\$164.07	\$167.35
<i>Documentation Specialist/Technical Writer</i>	<i>Bachelor's Degree</i>	<i>3 years</i>	\$79.65	\$81.24	\$82.87	\$84.52	\$86.21
<i>Manager, Technical Training</i>	<i>Bachelor's Degree</i>	<i>7 years</i>	\$121.81	\$124.25	\$126.73	\$129.27	\$131.85
<i>Technical Trainer</i>	<i>Bachelor's Degree</i>	<i>4 years</i>	\$93.70	\$95.58	\$97.49	\$99.44	\$101.43
<i>Security Manager</i>	<i>Bachelor's Degree</i>	<i>7 years</i>	\$234.26	\$238.94	\$243.72	\$248.60	\$253.57
<i>System Software Programmer</i>	<i>Bachelor's Degree</i>	<i>5 years</i>	\$123.69	\$126.16	\$128.68	\$131.26	\$133.88
<i>UNIX System Administrator</i>	<i>Bachelor's Degree</i>	<i>5 years</i>	\$121.81	\$124.25	\$126.73	\$129.27	\$131.85
<i>Storage Management Specialist</i>	<i>Bachelor's Degree</i>	<i>5 years</i>	\$117.13	\$119.47	\$121.86	\$124.30	\$126.78
<i>Enterprise Architect</i>	<i>Bachelor's Degree</i>	<i>7 years</i>	\$163.98	\$167.26	\$170.60	\$174.02	\$177.50
<i>Configurations Management Analyst</i>	<i>Bachelor's Degree</i>	<i>5 years</i>	\$89.02	\$90.80	\$92.61	\$94.47	\$96.36

Appendix B

54151S – IT PROFESSIONAL SERVICES LABOR CATEGORIES

IT ARCHITECT

Minimum Experience Required:

Minimum 5 years of experience with large and complex database, software or IT operational systems required.

Functional Responsibility:

Work with enterprise and solution architecture, application, and infrastructure teams to ensure an optimal project design and seamless technical project/solution delivery. Provide leadership to the project technical teams and mentor developers, and systems and network administrators. Responsible and accountable for deliverables associated with the IT technical team. Day to day activities will include: reviewing project requirements, creating detail designs, developing task lists and making assignments; reviewing deliverables from developers, systems administrators and systems integrations 3rd party vendors; providing updates to Project Manager; communicating with project teams. May also be responsible for complex development or systems tasks. Serve as project liaison to other IT teams, including Information Security, Database, Infrastructure, Network, etc. Coordinate project releases with Release Manager or Systems Administrator. Ensure secure coding practices and standards are followed.

Complexity:

Lead technical role. Defines and plans IT system architectures for enterprise systems. Works on multiple projects as a project leader. Works on projects/issues of high complexity that require in-depth knowledge across multiple technical areas and business segments. Coaches and mentors more junior technical staff.

Minimum Education Requirements:

Minimum Bachelor's Degree in Computer Science, Information Systems

SENIOR IT ARCHITECT

Minimum Experience Required:

Minimum 7 years of experience with large and complex database, software or IT operational systems required.

Functional Responsibility:

Work with enterprise and solution architecture, application, and infrastructure teams to ensure an optimal project design and seamless technical project/solution delivery. Provide leadership to the project technical teams and mentor developers, and systems and network administrators. Responsible and accountable for deliverables associated with the IT technical team. Day to day activities will include: reviewing project requirements, creating detail designs, developing task lists and making assignments; reviewing deliverables from developers, systems administrators and systems integrations 3rd party vendors; providing updates to Project Manager; communicating with project teams. May also be responsible for complex development or systems tasks. Serve as project liaison to other IT teams, including Information Security, Database, Infrastructure, Network, etc. Coordinate project releases with Release Manager or Systems Administrator. Ensure secure coding practices and standards are followed. Viewed both internally and externally as a technical expert and critical technical resource across multiple disciplines.

Complexity:

Expert/lead technical role. Defines and plans IT system architectures for enterprise systems. Works on multiple projects as a project leader or as the subject matter expert. Works on

projects/issues of high complexity that require in-depth knowledge across multiple technical areas and business segments. Coaches and mentors more junior technical staff.

Minimum Education Requirements:

Minimum Bachelor's Degree in Computer Science, Information Systems

APPLICATIONS PROGRAMMER / ANALYST

Minimum Experience Required:

Minimum 2 years of programming/systems analysis experience required.

Functional Responsibility:

Works closely with customers, business analysts, and team members to understand business requirements that drive the analysis and design of quality technical solutions. These solutions must be aligned with business and IT strategies and comply with the organization's architectural standards. Involved in the full systems life cycle development and is responsible for designing, coding, testing, implementing, maintaining and supporting applications software that is delivered on time and within budget. Makes recommendations towards the development of new code or reuse of existing code. Responsibilities may also include participation in component and data architecture design, performance monitoring, product evaluation and buy vs. build recommendations. Has experience in systems analysis, design and a solid understanding of development, quality assurance and integration methodologies.

Complexity:

Intermediate professional level role. Develops solutions requiring analysis and research. Works on small to large, complex projects that require increased skill in multiple technical environments and possesses knowledge in a specific business area. Works on one or more projects as a project team member or occasionally as a project lead.

Minimum Education Requirements:

Minimum Bachelor's Degree in Computer Science, Information Systems or Computer Engineering

SENIOR APPLICATIONS PROGRAMMER / ANALYST

Minimum Experience Required:

Minimum 5 years of programming/systems analysis experience required.

Functional Responsibility:

Works closely with customers, business analysts, and team members to understand business requirements that drive the analysis and design of quality technical solutions. These solutions must be aligned with business and IT strategies and comply with the organization's architectural standards. Involved in the full systems life cycle and is responsible for designing, coding, testing, implementing, maintaining and supporting applications software that is delivered on time and within budget. Makes recommendations towards the development of new code or reuse of existing code. Responsibilities may also include participation in component and data architecture design, performance monitoring, product evaluation and buy vs. build recommendations. Has experience in systems analysis, design and a solid understanding of development, quality assurance and integration methodologies.

Complexity:

Senior professional level role. Develops solutions requiring analysis and research. Works on small to large, complex projects that require increased skill in multiple technical environments and possesses knowledge in a specific business area. Works on one or more projects as a project team member or occasionally as a project lead. May coach more junior technical staff.

Minimum Education Requirements:

Minimum Bachelor's Degree in Computer Science, Information Systems or Computer Engineering

APPLICATIONS ARCHITECT

Minimum Experience Required:

Minimum 7 years of experience in multiple IT areas and 2 years of relevant architecture experience required. Requires advanced to expert level knowledge and understanding of architecture, applications systems design and integration.

Functional Responsibility:

Provides design recommendations based on long-term IT organization strategy. Develops enterprise level application and custom integration solutions including major enhancements and interfaces, functions and features. Uses a variety of platforms to provide automated systems applications to customers. Provides expertise regarding the integration of applications across the business. Determines specifications, then plans, designs, and develops the most complex and business critical software solutions, utilizing appropriate software engineering processes—either individually or in concert with project team. Will assist in the most difficult support problems. Develops programming and development standards and procedures as well as programming architectures for code reuse. Has in-depth knowledge of state-of-the art programming languages and object-oriented approaches in designing, coding, testing and debugging programs. Understands and consistently applies the attributes and processes of current application development methodologies. Researches and maintains knowledge in emerging technologies and possible application to the business. Viewed both internally and externally as a technical expert and critical technical resource across multiple disciplines. Acts as an internal consultant, advocate, mentor and change agent.

Complexity:

Expert/lead technical role. Works on multiple IT projects as a project leader. Works on projects/issues of high complexity that require in-depth knowledge across multiple technical areas and business segments. Coaches and mentors more junior technical staff.

Minimum Education Requirements:

Minimum Bachelor's Degree in Computer Science, Information Systems

MANAGER APPLICATIONS DEVELOPMENT

Minimum Experience Required:

Minimum 10 years of IT and business work experience including managing team(s) in systems analysis and programming functions required.

Functional Responsibility:

Coordinates systems analysis and applications development activities through direct and indirect staff. Directs development teams in the areas of scheduling, technical direction, future planning and standard development practices. Participates in budgeting and capital equipment processes and quality improvement activities for the development organization. Meets scheduled milestones to ensure project/ program objectives are met in a timely manner and has an in-depth knowledge of the principles, theories, practices and techniques for managing the activities related to planning, managing and implementing systems analysis and applications development projects and programs.

Breadth:

Middle level management in systems analysis and programming functions. Manages and mentors supervisors, project leads and/or technical staff. Works under general direction of senior level management. Frequently reports to a Director, Systems and Programming, Departmental IT Executive or Operating Unit IT Executive.

Minimum Education Requirements:

Minimum Bachelor's Degree in Computer Science, Information Systems, or Computer Engineering

BUSINESS ANALYST

Minimum Experience Required:

Minimum 3 years of relevant technical or business work experience required.

Functional Responsibility:

Serves as a liaison between the business community and the IT organization in order to provide technical solutions to meet user needs. Possesses expertise in the business unit(s) they support, as well as, an understanding of the IT organization's systems and capabilities. Analyzes business partner's operations to understand their strengths and weaknesses to determine opportunities to automate processes and functions. Assists in the business process redesign and documentation as needed for new technology. Translates high level business requirements into functional specifications for the IT organization and manages changes to such specifications.

Complexity:

Intermediate professional level role. Demonstrates an informed knowledge of a business area to resolve problems on an ongoing business. Supports several moderately complex business processes. Works on multiple projects as a project team member, occasionally as a project leader.

Minimum Education Requirements:

Minimum Bachelor's Degree in Computer Science, Information Systems, Business Administration

SENIOR BUSINESS ANALYST

Minimum Experience Required:

Minimum 8 years of relevant technical or business work experience required.

Functional Responsibility:

Serves as a liaison between the business community and the IT organization in order to provide technical solutions to meet user needs. Possesses expertise in the business unit(s) they support, as well as, an understanding of the IT organization's systems and capabilities. Analyzes business partner's operations to understand their strengths and weaknesses to determine opportunities to automate processes and functions. Assists in the business process redesign and documentation as needed for new technology. Translates high level business requirements into functional specifications for the IT organization and manages changes to such specifications. Educates the IT organization on the direction of the business. Negotiates agreements and commitments by facilitating communication between business unit(s) and IT from initial requirements to final implementation. Possesses an understanding of technological trends and uses this knowledge to bring solutions to business units supported to enhance the enterprise's competitive edge. May make recommendations for buy vs. build decision.

Complexity:

Intermediate professional level role. Works with business partners within one business function to align technology solutions with business strategies. Demonstrates an informed knowledge of a business area to resolve problems on an ongoing business. Supports several moderately complex business processes. Works on multiple projects as a project team member, occasionally as a project leader. May coach more junior staff.

Minimum Education Requirements:

Minimum Bachelor's Degree in Computer Science, Information Systems, Business Administration

SYSTEMS ADMINISTRATOR

Minimum Experience Required:

Minimum 3 years of IT work experience with software and hardware products, and systems administration experience with multi-platform environments required.

Functional Responsibility:

Responsible for ensuring the control, integrity, and accessibility of the business applications and IT systems for the enterprise. Responsible for change management procedures regarding the installation and testing of all upgrades and enhancements for the applications, systems and storage infrastructures. Responsible for proper initial installation as well as subsequent installations of updates/patches; preparation of system documentation; proactive, regular checks of system components for errors and application of necessary corrective action; set-up and maintenance of Web servers and business and IT systems. Knowledgeable in all levels of Internet/Web security and the associated requirements for their application. Designs, develops and administers firewalls as a means of preventing unauthorized access to enterprise networks. Provides technical support to internal users and external customers; troubleshoots problems and takes corrective action on a timely, effective basis.

Complexity:

Intermediate professional level role. Works on small to large, moderately complex Web sites and systems. Works on multiple IT systems as a project team member, occasionally as a project leader.

Minimum Education Requirements:

Minimum Bachelor's Degree in Computer Science, or Information Systems

SENIOR SYSTEMS ADMINISTRATOR

Minimum Experience Required:

Minimum 7 years of IT work experience, software and hardware products, and systems administration experience with multi-platform environments required.

Functional Responsibility:

Responsible for ensuring the control, integrity, and accessibility of the business applications and IT systems for the enterprise. Responsible for change management procedures regarding the installation and testing of all upgrades and enhancements for the applications, systems and storage infrastructures. Responsible for proper initial installation as well as subsequent installations of updates/patches; preparation of system documentation; proactive, regular checks of system components for errors and application of necessary corrective action; set-up and maintenance of Web servers and business and IT systems. Knowledgeable in all levels of Internet/Web security and the associated requirements for their application. Designs, develops and administers firewalls as a means of preventing unauthorized access to enterprise networks. Provides technical support to internal users and external customers; troubleshoots problems and takes corrective action on a timely, effective basis.

Complexity:

Senior professional level role. Works on small to large, moderately complex Web sites and systems. Works on multiple IT systems as a project team member, occasionally as a project leader. May coach more junior technical staff.

Minimum Education Requirements:

Minimum Bachelor's Degree in Computer Science, or Information Systems

SERVICE DESK REPRESENTATIVE

Minimum Experience Required:

Minimum 3 years of IT work experience, software and hardware products support and troubleshooting required.

Functional Responsibility:

Provide technical support to internal and external customers. Provide assistance in the use of software applications and desktop computers and tablet devices. Diagnose and troubleshoot all software, integrated products, and hardware peripherals as needed. Perform limited hardware support based on Help Desk support guidelines. Provide problem resolution requiring the use of diagnostic tools and analytical skills to aid in troubleshooting issues. Reference applicable support documentation to assist in the research of a resolution to a problem. Test solutions to technical issues. Submit unresolved issues to other Information Technology groups. Document all calls in the incident call-tracking system. Document resolutions to recurring problems, anomalies, and trends for technical and training materials. Follow up on critical or high system outage escalated incidents. Flexibility regarding the change of shift assignments to meet business needs. Ensure that proactive measures are taken to identify potential customer problems.

Complexity:

Intermediate professional level role. Works on small to moderately complex customer IT support issues.

Minimum Education Requirements:

Minimum Bachelor's Degree in Information Technology

SENIOR SERVICE DESK REPRESENTATIVE

Minimum Experience Required:

Minimum 5 years of IT work experience, software and hardware products support and troubleshooting required.

Functional Responsibility:

Provide technical support to internal and external customers. Provide assistance in the use of software applications and desktop computers and tablet devices. Diagnose and troubleshoot all software, integrated products, and hardware peripherals as needed. Perform limited hardware support based on Help Desk support guidelines. Provide problem resolution requiring the use of diagnostic tools and analytical skills to aid in troubleshooting issues. Reference applicable support documentation to assist in the research of a resolution to a problem. Test solutions to technical issues. Submit unresolved issues to other Information Technology groups. Document all calls in the incident call-tracking system. Document resolutions to recurring problems, anomalies, and trends for technical and training materials. Follow up on critical or high system outage escalated incidents. Flexibility regarding the change of shift assignments to meet business needs. Ensure that proactive measures are taken to identify potential customer problems.

Complexity:

Intermediate to Senior professional level role. Works on small to moderately complex customer IT support issues. Works on multiple IT systems as a project team member, occasionally as a project leader. May coach more junior technical staff.

Minimum Education Requirements:

Minimum Bachelor's Degree in Information Technology

PROJECT MANAGER

Minimum Experience Required:

Minimum 5 years of IT work experience, including 4 or more years managing projects. Experience with projects in multiple technologies and functions required.

Functional Responsibility:

Responsible for overall coordination, status reporting and stability of project-oriented work efforts. Establishes and implements project management processes and methodologies for the IT community to ensure projects are delivered on time, within budget, adhere to high quality standards and meet customer expectations. Responsible for assembling project plans and teamwork assignments, directing and monitoring work efforts on a daily basis, identifying resource needs, performing quality review; and escalating functional, quality, timeline issues appropriately. Responsible for tracking key project milestones and adjusting project plans and/or resources to meet the needs of customers. Coordinates communication with all areas of the enterprise that impacts the scope, budget, risk and resources of the work effort being managed. Assists Program Manager(s) in partnering with senior management of the business community to identify and prioritize opportunities for utilizing IT to achieve the goals of the enterprise. Must possess extensive knowledge and expertise in the use of project management methodologies and tools, resource management practices and change management techniques. This is a management role with human resource management responsibilities (e.g., hiring, performance management). Manages one or more cross-functional projects of medium to high complexity. More senior role has responsibility for multiple large, complex projects with greater impact to the enterprise.

Breadth:

Middle level management. Works under general direction of senior level management. Responsible for the management of one or more medium to large-sized, moderately to highly complex projects.

Minimum Education Requirements:

Minimum Bachelor's Degree in Computer Science, Information Systems, Business Administration, or Project Management certificate completed in recognized project management curriculum.

SENIOR PROJECT MANAGER

Minimum Experience Required:

Minimum 10 years of IT work experience, including 4 or more years managing projects. Experience with projects in multiple technologies and functions required.

Functional Responsibility:

Responsible for overall coordination, status reporting and stability of project-oriented work efforts. Establishes and implements project management processes and methodologies for the IT community to ensure projects are delivered on time, within budget, adhere to high quality standards and meet customer expectations. Responsible for assembling project plans and teamwork assignments, directing and monitoring work efforts on a daily basis, identifying resource needs, performing quality review; and escalating functional, quality, timeline issues appropriately. Responsible for tracking key project milestones and adjusting project plans and/or resources to meet the needs of customers. Coordinates communication with all areas of the enterprise that impacts the scope, budget, risk and resources of the work effort being managed. Assists Program Manager(s) in partnering with senior management of the business community to identify and prioritize opportunities for utilizing IT to achieve the goals of the enterprise. Must possess extensive knowledge and expertise in the use of project management methodologies and tools, resource management practices and change management techniques. This is a management

role with human resource management responsibilities (e.g., hiring, performance management). Manages one or more cross-functional projects of medium to high complexity. More senior role has responsibility for multiple large, complex projects with greater impact to the enterprise.

Breadth:

Senior level management. Works under general direction of director level management. Responsible for the management of one or more medium to large-sized, moderately to highly complex projects. Manages and mentors project leaders and project management staff.

Minimum Education Requirements:

Minimum Bachelor's Degree in Computer Science, Information Systems, Business Administration, or Project Management certificate completed in recognized project management curriculum.

PROGRAM MANAGER

Minimum Experience Required:

Minimum 10 years of IT and business/industry work experience, with at least 3 years of leadership experience and 5 years in managing projects required.

Functional Responsibility:

Responsible for managing one or more highly complex or enterprise-wide IT program(s) consisting of multiple projects. Develops the program strategy, supporting business case and various enterprise-wide high-level project plans. Ensures integration of projects and adjusts project scope, timing, and budgets as needed, based on the needs of the business. Communicates with IT leadership, business leadership and IT Business Consultants to communicate program strategy, direction and changes. Responsible for delivering all projects contained in the IT project portfolio on time, within budget and meeting the strategic and business requirements. Responsible for tracking key project milestones and recommending adjustments to Project Managers. Partners with senior leadership of the business community to identify and prioritize opportunities for utilizing IT to achieve the goals of the enterprise. Must possess extensive knowledge and expertise in the use of Project Management methodologies and tools. This is a single or multiple incumbent(s) position that exists in a small to medium size enterprise with multiple project managers, project leaders and/or project support staff as direct reports.

Breadth:

Senior level management with overall responsibility for the management of one highly complex or enterprise-wide program consisting of multiple projects. Responsible for managing all aspects of the design, development and implementation of the program. Directs and mentors a team of project managers, portfolio managers and/or other project management staff. Frequently reports to a Chief Information Officer, Chief Technology Officer, IT Chief Operating Officer or Director, Program Management.

Minimum Education Requirements:

Minimum Bachelor's in Computer Science, Business Administration. Project Management certification is required.

SENIOR PROGRAM MANAGER

Minimum Experience Required:

Minimum 15 years of IT and business/industry work experience, with at least 10 years of leadership experience and 6 years in managing projects required.

Functional Responsibility:

Responsible for managing one or more highly complex or enterprise-wide IT program(s) consisting of multiple projects. Develops the program strategy, supporting business case and various enterprise-wide high-level project plans. Ensures integration of projects and adjusts project scope, timing, and budgets as needed, based on the needs of the business. Communicates with IT leadership, business leadership and IT Business Consultants to communicate program strategy, direction and changes. Responsible for delivering all projects contained in the IT project portfolio on time, within budget and meeting the strategic and business requirements. Responsible for tracking key project milestones and recommending adjustments to Project Managers. Partners with senior leadership of the business community to identify and prioritize opportunities for utilizing IT to achieve the goals of the enterprise. Must possess extensive knowledge and expertise in the use of Project Management methodologies and tools. This is a single or multiple incumbent(s) position that exists in a small to medium size enterprise with multiple project managers, project leaders and/or project support staff as direct reports.

Breadth:

Senior level management with overall responsibility for the management of one highly complex or enterprise-wide program consisting of multiple projects. Responsible for managing all aspects of the design, development and implementation of the program. Directs and mentors a team of project managers, portfolio managers and/or other project management staff. Frequently reports to a Chief Information Officer, Chief Technology Officer, IT Chief Operating Officer or Director, Program Management.

Minimum Education Requirements:

Minimum Bachelor's Degree in Computer Science, Business Administration. Project Management certification is required.

SYSTEMS ANALYST

Minimum Experience Required:

Minimum 3 years of systems analysis/programming experience required.

Functional Responsibility:

Responsible for the design and development of IT systems. Develops design and functional specifications, produces deliverables related to the project(s) assigned and assists in post implementation support and system enhancements. Responsible for selecting appropriate C.A.S.E. tools to develop systems and software. Responsible for gathering, compiling and synthesizing information with regard to technology processes or systems. Possesses experience in minicomputer or client/server environments including the implementation and support of resource planning, sales automation, marketing, financial and distribution systems.

Complexity:

Intermediate professional level role. Develops systems solutions requiring analysis and research. Works on small to large, complex projects that require increased skill in multiple technical environments and possesses knowledge in a specific business area.

Minimum Education Requirements:

Minimum Bachelor's Degree in Computer Science, Information Systems or Computer Engineering

DATA ARCHITECT

Minimum Experience Required:

Minimum 7 years of experience with large and complex database management systems required.

Functional Responsibility:

Responsible for enterprise-wide data design, balancing optimization of data access with batch loading and resource utilization factors. Knowledgeable in most aspects of designing and constructing data architectures, operational data stores, and data marts. Focuses on enterprise-wide data modeling and database design. Defines data architecture standards, policies and procedures for the organization, structure, attributes and nomenclature of data elements, and applies accepted data content standards to technology projects. Responsible for business analysis, data acquisition and access analysis and design, Database Management Systems optimization, recovery strategy and load strategy design and implementation. Develops database and warehousing designs across multiple platforms and computing environments. Develops an overall data architecture that supports the information needs of the business in a flexible but secure environment.

Complexity:

Expert/lead technical role. Defines and plans database architectures for enterprise systems. Works on multiple projects as a project leader or as the subject matter expert. Works on projects/issues of high complexity that require in-depth knowledge across multiple technical areas and business segments. Coaches and mentors more junior technical staff.

Minimum Education Requirements:

Minimum Bachelor's Degree in Computer Science, Information Systems

DATABASE ANALYST

Minimum Experience Required:

Minimum 3 years of IT work experience in DBA, DBMS design and support and relevant computing environments required.

Functional Responsibility:

Responsible for designing, modeling, developing and supporting Database Management Systems (DBMS). Analyzes data requirements, application and processing architectures, data dictionaries, and database schema(s), and then designs, develops, amends, optimizes, and certifies database schema design to meet system(s) requirements. Gathers, analyzes, and normalizes relevant information related to, and from business processes, functions, and operations to evaluate data credibility and determine relevance and meaning.

Complexity:

Intermediate professional level role. Designs and supports DBMS of low to medium complexity. Works on one or more projects as a project team member or sometimes as a project leader. May coach more junior technical staff.

Minimum Education Requirements:

Minimum Bachelor's Degree in Computer Science, Information Systems or Computer Engineering

DATABASE ADMINISTRATOR

Minimum Experience Required:

Minimum 5 years of experience working with various database management systems in database design, testing, implementation, maintenance and administration in a multiple platform environment required.

Functional Responsibility:

Manages and maintains all production and non-production databases. Responsible for standards and design of physical data storage, maintenance, access and security administration. Performs backup and recovery on Database Management Systems, configures database parameters, and prototype designs against logical data models, defines data repository requirements, data dictionaries and warehousing requirements. This position optimizes database access and allocates/re-allocates database resources for optimum configuration, database performance and cost.

Complexity:

Intermediate professional level role. Supports multiple services and multiple databases of medium to high complexity (complexity defined by database size, technology used, systems feeds and interfaces) with multiple concurrent users, ensuring control, integrity and accessibility of data. Works on multiple projects as a project leader or sometimes as a project advisor. May coach more junior technical staff.

Minimum Education Requirements:

Minimum Bachelor's Degree in Computer Science, Information Systems, or Computer Engineering

QUALITY ASSURANCE ANALYST

Minimum Experience Required:

Minimum 5 years of systems development, testing and/or business experience required.

Functional Responsibility:

Responsible for developing and executing formal test plans to ensure the delivery of quality software applications. Involved in test planning, writing test cases/scripts, test case automation and test execution. Defines and tracks quality assurance metrics such as defects, defect counts, test results and test status. Collects and analyzes data for software process evaluation and improvements, and integrates them into business processes to address the business needs. Documents all problems and assists in their resolution. Delivers quality process training to technical staff and acts as an internal quality consultant to advise or influence business or technical partners. Performs quality audits across the various IT functions to ensure quality standards, procedures and methodologies are being followed.

Complexity:

Intermediate professional level role. Works on projects of moderate to high complexity within one or more development environments. Works on multiple programs/systems as a project team member. Considered a subject matter expert for a single program/system. May coach more junior technical staff.

Minimum Education Requirements:

Minimum Bachelor's Degree in Computer Science, Information Systems, or Computer Engineering

CUSTOMER SUPPORT ANALYST

Minimum Experience Required:

Minimum 2 years of IT work experience with demonstrated working knowledge of basic to moderately complex hardware and software products and problem solving/troubleshooting skills required.

Functional Responsibility:

Responsible for Tier 1 and 2 software and hardware support. Provides technical advice, guidance and informal training to customers using hardware and software programs. Troubleshoots and restores routine technical service and equipment problems by analyzing, identifying and diagnosing faults and symptoms using established processes and procedures. Performs root cause analysis and develops checklists for problems. Recommends procedures and controls for problem prevention. Maintains knowledge database and call tracking database to enhance quality of problem resolutions. Works in a team setting, sharing information and assisting others with calls.

Complexity:

Intermediate professional level role. Provides Tier 1 and Tier 2 support of medium to high complexity. Works in a team as a team member. May coach more junior technical staff.

Minimum Education Requirements:

Minimum Bachelor's Degree in Computer Science, Information Systems, or Computer Engineering

NETWORK ARCHITECT

Minimum Experience Required:

Minimum 7 years of IT work experience in infrastructure/network environments performing network planning, architecture design, engineering (hardware and software) and optimization required.

Functional Responsibility:

Responsible for high-level network planning, design, and optimization. Develops strategies and direction for network systems solutions using current and emerging technologies (including wireless). Translates business requirements into network or process designs. Plans and recommends network hardware, systems management software and architecture. Approves and modifies network design and architecture to ensure compliance. Configures and maintains routers, switches, and hubs for the network systems (including wireless). Evaluates and recommends new products, maintains knowledge of emerging technologies for application to the enterprise. Monitors network performance, ensures capacity planning is performed, and is proactive in assessing and making recommendations for improvement. Performs troubleshooting procedures and designs resolution scripts. May take on role of Project Leader for special enterprise-wide assignments.

Complexity:

Expert/lead technical role. Defines network architectures and design for the enterprise. Works on multiple projects as a project leader or as the subject matter expert. Works on projects/issues of high complexity that require in-depth knowledge across multiple technical areas and business segments. Coaches and mentors more junior technical staff.

Minimum Education Requirements:

Minimum Bachelor's Degree in Computer Science, Information Systems, or Computer Engineering

NETWORK ENGINEER

Minimum Experience Required:

Minimum 5 years of IT work experience in infrastructure/network environments performing network engineering (hardware and/or software), design, planning and implementation required.

Functional Responsibility:

Assists in the planning, forecasting, implementation, and identification of resource requirements for network systems (including wireless) of moderate complexity. Participates in network planning, network architecture design and engineering. Integrates and schematically depicts communication architectures, topologies, hardware, software, transmission and signaling links and protocols into complete network configurations. Evaluates new products, performs network problem resolution and assists in the development and documentation of technical standards and interface applications. Monitors protocol compatibility, performs system tuning and makes recommendations for improvement.

Complexity:

Intermediate professional level role. Works on projects/ systems/issues of medium to high complexity surrounding network planning, configuration and optimization. Works on one or more projects as a project team member, occasionally as a project team lead. May coach more junior technical staff.

Minimum Education Requirements:

Minimum Bachelor's Degree in Computer Science, Information Systems, or Computer Engineering

NETWORK ANALYST

Minimum Experience Required:

Minimum 3 years of IT work experience in infrastructure/network environments in network design, implementation, administration and support required.

Functional Responsibility:

Responsible for designing, installing and troubleshooting network systems (including wireless) to meet the functional objectives of the business. Involved with the configuration and maintenance of physical and logical network components. Assists in the design of the network architecture, designs the network infrastructure, and plans and designs LAN/WAN/wireless solutions. Performs capacity and resource planning, assessing network risks and contingency planning. Responsible for the implementation and maintenance of network management software; researching, analyzing and implementing software patches or hardware changes to fix any network deficiencies. Provides Tier 2 support. Involved in the evaluation of new products and services, may manage vendor service level agreements.

Complexity:

Intermediate professional level role. Works on projects/systems/issues of medium to high complexity. Provides support in designing, implementing, supporting and maintaining network systems. Works on one or more projects as a project team member, occasionally as a project leader. May coach more junior technical staff.

Minimum Education Requirements:

Minimum Bachelor's Degree in Computer Science, Information Systems, or Computer Engineering

INTERNET / WEB ARCHITECT

Minimum Experience Required:

Minimum 5 years of IT work experience with demonstrated knowledge in architecture design, software development, database management systems and systems integration in multi-platform environments required.

Functional Responsibility:

Responsible for gathering business requirements and translating them into Internet/Web architecture to achieve business objectives. Analyzes assigned specifications, planning, designing, and developing solutions, utilizing appropriate Internet/Intranet/Extranet architecture processes supporting a wide range of content—either individually or in concert with project team members. Provides appropriate documentation for object design decisions, estimating assumptions, applets, and performance metrics—as required by organization architecture process standards, or as assigned. Responsible for minimizing the issues between the client and the server applications and for the overall set-up and design of the Internet and Web server architecture. Impact and complexity of this job increases if organization is utilizing Internet solutions (vs. only Intranet), especially those with significant business impact (e.g., e-business).

Complexity:

Advanced professional level role. Defines Web architectures and design for the enterprise. Works on multiple projects as a project leader or frequently as the subject matter expert. Works on projects/issues of medium to high complexity that require demonstrated knowledge across multiple technical areas and business segments. Coaches and mentors more junior technical staff.

Minimum Education Requirements:

Minimum Bachelor's Degree in Computer Science, Information Systems, or Computer Engineering

WEB APPLICATIONS PROGRAMMER

Minimum Experience Required:

Minimum 5 years of IT work experience in software development, installation and modification in an online environment required.

Functional Responsibility:

Develops, maintains, and supports applications for the organization's Internet/Intranet sites. Gathers and analyzes requirements. Programs all or selected components of Web applications. Documents components and applications. Develops automation techniques to enable end-user content publishing; programs, tests and implements mapped graphic images, forms and HTML pages; handles client browser support inquiries; maintains links to external sites and accuracy on internal links while ensuring up-to-date information. Researches, evaluates and recommends new Internet tools and applications for use in assigned responsibilities. The senior level Web Applications Programmer has experience in a variety of the more difficult Web tools and languages.

Complexity:

Intermediate professional level role. Develops solutions requiring analysis and research. Works on small to large, complex projects that require increased skill in multiple technical environments and possesses knowledge in a specific business area. Works on one or more projects as a project team member or occasionally as a project leader. May coach more junior technical staff.

Minimum Education Requirements:

Minimum Bachelor's Degree in Computer Science, Information Systems, or Computer Engineering

WEB DESIGNER

Minimum Experience Required:

Minimum 3 years of combined IT and graphic design experience. Able to understand HTML and strong working knowledge of Web generators and photographic libraries. Possesses a portfolio of Web sites or solutions required.

Functional Responsibility:

Responsible for the design, development and creation of user-centered designs for Web sites. Responsibilities include human factors engineering, heuristic evaluations and usability testing for Web and client-based applications as well as metrics setting and monitoring for assessing the usability of the Web application. Works to improve the usability, usefulness, and desirability of Web sites in collaboration with Graphic Designers, Product Managers, Engineering Staff and other Web Designers. Must be able to perform usability tests, provide design prototypes and provide ad hoc user interface consulting. Responsible for requirements gathering and articulation of user interface issues—including development of page/site prototypes. Must be knowledgeable of user-centered design methodology, user scenarios, usability testing, storyboarding, paper and interactive prototypes. Must have demonstrated skills in graphic applications, HTML development tools and other applicable authoring tools, Web production, front-end development using programming and scripting languages. Must be able to integrate design into program rules and system architecture and create innovative approaches to improving the end-user experience. Must be familiar with platform/browser compatibility and basic usability issues.

Complexity:

Intermediate professional level role. Works on moderately complex, to complex projects that require a solid understanding of Web design and layout. Works on multiple projects as a team member and sometimes as a project leader. May coach more junior technical staff.

Minimum Education Requirements:

Minimum Bachelor's Degree in Computer Science, Information Systems, Graphic Design, or Computer Engineering

MANAGER, TELECOMMUNICATIONS OPERATIONS

Minimum Experience Required:

Minimum 7 years of IT work experience including managing team(s) responsible for infrastructure/network/telecommunications operations and support in multi-platform environments required.

Functional Responsibility:

Manages the operations, daily planning, engineering, design, and resource allocation for the enterprise's telecommunications functions. Ensures customer satisfaction through quality standards and measures by evaluating the performance of telecommunications networks and related interfaces. Responsible for strategic telecommunications planning and works with senior IT leadership to coordinate telecommunication plans with those of the business. Develops and implements standards, procedures, and processes for the telecommunications group. Plans and manages the support of new technologies, performance and reliability. Defines and negotiates service level agreements. Oversees and coordinates the daily activities of the operations center. Performs a coordination role with enterprise management, vendors and customers.

Breadth:

Middle level management in telecommunications operations. Works under general direction of

senior level management. Manages and mentors supervisors, project leaders and/or technical staff. Works on multiple, complex projects as a project leader and a subject matter expert. Frequently reports to an IT Chief Operating Officer, Operating Unit IT Executive or Departmental IT Executive.

Minimum Education Requirements:

Minimum Bachelor's Degree in Computer Science or Information Systems

TELECOMMUNICATIONS ENGINEER

Minimum Experience Required:

Minimum 5 years of IT work experience in telecommunications and multi-platform environments required.

Functional Responsibility:

Responsible for engineering and/or analytical tasks and activities associated with areas within the telecommunications function (e.g., network design, engineering, implementation, diagnostics or operations/user support). Monitors the operation of telecom network systems. Performs complex tasks relating to telecom network operations, installation, and/or maintenance for local, off-site and/or remote locations. The scope of responsibility for this position includes, but is not limited to, the configuration, deployment, testing, maintenance, monitoring and trouble-shooting of telecommunications network components to provide a secure, high performance network. Duties also entail quality assurance and testing of transmission mediums and infrastructure components. Serves as technical specialist/lead on a functional basis, for the resolution of complex network problems. Experience should include: moves, adds and changes, fault isolation and resolution, and end-user support. Requires broad knowledge of telecom systems, dial plans, switching architecture, telephony and wiring.

Complexity:

Intermediate professional level role. Provides technical support and maintenance for existing and new telecommunications services. Works on moderate to complex projects as a team member. May lead team and coach more junior technical staff.

Minimum Education Requirements:

Minimum Bachelor's Degree in Computer Science, or Information Systems

TELECOMMUNICATIONS TECHNICIAN

Minimum Experience Required:

Minimum 1 year of IT work experience with basic understanding of telecommunications and multi-platform environments required.

Functional Responsibility:

Under direct supervision, monitors, operates, installs and maintains telecommunications systems and equipment in addition to troubleshooting any type of hardware or software problems to ensure that systems perform in a manner which best meets business needs and objectives. Responsible for the installation, maintenance and repair of telecommunications equipment. Assists in the installation of telecom systems and equipment for new company facilities. Performs telecom network software installations and maintenance of network database for system maintenance and billing support. Possesses knowledge of data scopes, patch panels, modems and various analog and digital signaling systems. Must demonstrate thorough knowledge of T-1 network architecture and operating procedures. Knowledge of line control techniques and communication access methodology is needed. Must be able to read engineering drawings and terminate cables and grounding systems.

Complexity:

Learner/entry level role. Provides technical support and maintenance for existing telecommunications services. Works on low to moderately complex projects as a team member.

Functions, relatively independently, under direction of senior professionals, supervisors or managers. Generally, follows documented procedures and checklists.

Minimum Education Requirements:

Minimum Associate's Degree, or technical institute degree/certificate in Computer Science, Information Systems

BUSINESS INTELLIGENCE ANALYST

Minimum Experience Required:

Minimum 7 years of relevant technical or business work experience, with at least 3 years in a BI or Data Analyst role with hands-on experience crunching large data sets required.

Functional Responsibility:

Must have the ability to drive projects, recognize opportunities and collaborate with business and IT stakeholders to implement IT solutions. Possess strong business acumen, solid technical expertise to extrapolate data, deep knowledge in big data and decision support systems. Comfortable working in a fast-paced environment. Excellent interpersonal, communication and influencing skills across organizational levels in diverse cultures are critical. Analyze data to identify trends and patterns, formulate insights and provide recommendation for action. Partner with business stakeholders to envision and deploy system solutions. Translate business requirements into conceptual IT solution proposal or prototype. Manage projects of varying scale and complexity; including project planning, budgeting, resourcing, scheduling, communication and implementation. Seek best practices to improve system functionalities and performance. Demonstrate strong analytical and problem-solving skills, and work on enterprise reporting & analytic tools and decision support solutions to solve assigned business or operations problems.

Complexity:

Intermediate professional level role. Works with business partners within one business function to align technology solutions with business strategies. Demonstrates an informed knowledge of a business area to resolve problems on an ongoing business. Supports several moderately complex business processes. Works on multiple projects as a project team member, occasionally as a project leader. May coach more junior staff.

Minimum Education Requirements:

Minimum Bachelor's Degree in Computer Science, Information Systems, or Business Administration

DATA WAREHOUSE ANALYST

Minimum Experience Required:

Minimum 5 years of IT work experience in business intelligence tools and systems required.

Functional Responsibility:

Responsible for gathering and assessing business information needs and preparing system requirements. Performs analyses, development and evaluation of data mining in a data warehouse environment which includes data design, database architecture, metadata and repository creation. Uses data mining and data analysis tools. Reviews and validates data loaded into the data warehouse for accuracy. Interacts with user community to produce reporting requirements. Provides technical consulting to users of the various data warehouses and advises users on conflicts and inappropriate data usage. Responsible for prototyping solutions, preparing test scripts, and conducting tests and for data replication, extraction, loading, cleansing, and data modeling for data warehouses. Maintains knowledge of software tools, languages, scripts, and shells that effectively support the data warehouse environment in different operating system environments. Possesses working knowledge of Relational Database Management Systems

(RDBMS) and data warehouse front-end tools. Must have an extensive knowledge of data warehouse and data mart concepts.

Complexity:

Intermediate professional level role. Provides data warehouse architectural design, development and support in multi-platform environments. Works on multiple projects as a team member and may lead projects of moderate complexity. May coach more junior technical staff.

Minimum Education Requirements:

Minimum Bachelor's Degree in Computer Science, Information Systems, or Computer Engineering

MANAGER, CRM TECHNOLOGY

Minimum Experience Required:

Minimum 10 years of IT work experience including managing team(s) responsible for data warehousing, decision support systems or marketing support information systems required.

Functional Responsibility:

Responsible for leading a team in analyzing and determining business requirements and managing the planning and execution of Customer Relationship Management (CRM) technology and associated programs to achieve business objectives of enhancing customer satisfaction, optimizing profitability and developing long-term customer loyalty. Acts as a liaison between the IT and business communities in developing and implementing CRM solutions, manages the business impact of all CRM projects. Oversees the development and improvement of the technology framework that supports the integration of enterprise customer response process through various customer services channels (e.g., mail, email, Web, call center). Partners with Sales, Marketing and the business community to develop CRM strategies and support the development and execution of customer campaigns and promotions by mining the enterprise CRM database. Works closely with data management, infrastructure and development groups to ensure required data and systems are in place to meet the enterprise's CRM needs. Leads the research, evaluation and selection of CRM technologies. Possesses a thorough understanding of data architectural development methodology, process and data modeling, Web and call center technologies for CRM solutions. Has working knowledge of database marketing methodologies and processes, including but are not limited to channel and segment marketing, direct marketing and online marketing. Strong project management skills in planning and monitoring projects in a cross-functional environment.

Breadth:

Middle level management. Works under general direction of senior level management. Manages and mentors supervisors, project leads and/or technical staff. Responsible for leading a team of analysts and developers performing work in designing, developing and maintaining CRM systems and applications. Frequently reports to a Chief Technology Officer, Director, Data Warehouse or Director, Systems and Programming.

Minimum Education Requirements:

Minimum Bachelor's Degree in Computer Science, Information Systems, Business Administration or Computer Engineering

ERP PROGRAMMER / ANALYST

Minimum Experience Required:

Minimum 5 years of IT work experience in programming and/or ERP systems analysis. Requires advanced programming techniques and software design, and advanced knowledge of ERP applications.

Functional Responsibility:

Applies system solutions to business problems through the design and programming of automated systems. Configures, analyzes, designs, develops, and maintains ERP program codes and

applications to support business processes and functions. Works on elements of large, complex installations. Performs all aspects of programming assignments and assists with systems design. Fully knowledgeable in ERP programming languages. Applies knowledge and experience with technology and application development methodologies to perform basic systems analysis techniques, testing, debugging, file design and storage.

Complexity:

Intermediate professional level role. Works on multiple projects as a project team member, occasionally as a technical leader. Works on small to large, complex projects that require increased skill in multiple technical environments and knowledge of a specific business area. May coach more junior technical staff.

Minimum Education Requirements:

Minimum Bachelor's Degree in Computer Science, Information Systems, or Computer Engineering

ERP SYSTEM ADMINISTRATOR

Minimum Experience Required:

Minimum 5 years of business and/or ERP implementation experience. Experience with systems and database administration required.

Functional Responsibility:

Responsible for ensuring the performance and reliability of ERP systems. Performs troubleshooting for hardware, software and system problems that involve ERP modules. Participates in projects to implement or enhance ERP systems and applications. Works with database administrator and ERP development team in defining user requirements, coordinating system-wide updates and installing upgrades and patches for ERP systems. Provides recommendations for enhancements/changes that may involve custom design, optional and third-party products to improve the efficiency and effectiveness of ERP systems. Maintains ERP systems security through user profile management, creates and updates access permissions and maintains user accounts. Monitors and maintains performance metrics for system features, recommends and takes corrective/preventive actions. Participates in the design, development and implementation of test and production objects. Performs configuration, change management and testing activities as required. Consults users on technology changes that will impact work processes.

Complexity:

Intermediate professional level role. Works on multiple projects as a project team member, occasionally as a technical leader. Responsible for maintaining ERP systems and applications, supporting and training users for ERP system(s) and applications usage. Works on small to large, complex projects that require increased skill in multiple technical environments and knowledge of a specific business area. May coach more junior technical staff.

Minimum Education Requirements:

Minimum Bachelor's Degree in Computer Science, Information Systems, or Computer Engineering

DOCUMENTATION SPECIALIST / TECHNICAL WRITER

Minimum Experience Required:

Minimum 3 years of business or technical writing experience and working knowledge of multiple software and graphics packages required.

Functional Responsibility:

Responsible for creation and maintenance of IT documentation. Translates technical and/or complicated information into clear, concise documents appropriate for various target audiences. Works with Development, Quality Assurance and Technical Support to produce a wide variety of

technical publications including instructional materials, technical manuals, product documentation and the like for use by both the IT and business community. Interviews subject matter experts and technical staff to collect information, prepare written text, and coordinate layout and material organization. Researches information such as drawings, design reports, equipment and test specifications to fill any gaps. Reviews, critiques, and edits documentation including design documents, programmer notes and system overviews. Requires knowledge of company product lines and document structure. Depending on the industry/work environment, such documents may include various media, including written and video. Responsibilities include maintenance of internal documentation library, providing and/or coordinating special documentation services as required, and oversight of special projects. Must have strong organizational and project management skills and excellent writing and editing skills.

Complexity:

Intermediate professional level role. Works on several moderately complex, to complex document management projects as a project team member. May coach more junior staff.

Minimum Education Requirements:

Minimum Bachelor's Degree in Journalism, Technical Writing, or Business Administration

MANAGER, TECHNICAL TRAINING

Minimum Experience Required:

Minimum 7 years of Training (including curriculum development for IT and instructional technology) experience. 2 or more years of training management experience required.

Functional Responsibility:

Manages the IT training life cycle, including needs analysis, training strategy and development and delivery of training programs and tools for IT professionals and end-users. Additionally, implements and manages a skills management and competency development process for the IT professional staff and end-user community. Coordinates or provides services to identify business and subsequent training drivers for the organization and identifies technology drivers for the analysis of roles and their associated skills and competencies. Leads analysis of current skills to identify skill gaps and works with IT to prioritize skills training and development imperatives. Ensures a technical learning environment exists in the organization. Responsible for ensuring capability of technology is maximized through effective training, resulting in transfer of knowledge and skills that support organizational needs. Oversees the development of curriculums and specific courseware to address skill gaps for IT professionals and end-users, and oversees the selection and usage of various training delivery systems and certification/testing methods to assess the effectiveness and efficiency of programs. Measures training return on investment (ROI) and helps to pilot test new training techniques, strategies, tools and processes to increase training effectiveness.

Breadth:

Middle level management. Works under general direction of senior level management. Manages and mentors supervisors, project leads and/or technical staff. Works on multiple, complex projects as a project leader and a subject matter expert. Frequently reports to a corporate training officer, IT Chief Operating Officer or Chief Information Officer.

Minimum Education Requirements:

Minimum Bachelor's Degree in Instructional Technology, Computer Science, or Information Systems, Education

TECHNICAL TRAINER

Minimum Experience Required:

Minimum 4 years of Training (including IT course development and delivery) experience required.

Functional Responsibility:

Responsible for the creation, and delivery of training and development programs to all levels of end-users, business and IT professionals. Involved in training needs assessment process and vendor selection. Works closely with both IT and the business to understand system and training needs for applications and packages supported. Develops documentation for custom applications and packaged applications, using a variety of mediums as needed. Designs training programs, classes, workshops, and Computer Based Training (CBT) and on-line help. Delivers training to a variety of audiences, understanding and applying adult learning principles.

Complexity:

Intermediate professional level role. Works independently or on multiple IT training projects as a project team member, occasionally as a project leader. Works on small to large, complex IT training projects that require increased skill in multiple technical environments and knowledge of a specific business area. May coach more junior staff.

Minimum Education Requirements:

Minimum Bachelor's Degree in Instructional Technology, Computer Science, Information Systems, or Education

SECURITY MANAGER

Minimum Experience Required:

Minimum 7 years of IT work experience with a broad range of exposure to all aspects of business planning, systems analysis and applications development. Experience with managing team(s) and project(s) for information security management required.

Functional Responsibility:

Manages the development and delivery of IT security standards, best practices, architecture and systems to ensure information system security across the enterprise. Implements processes and methods for auditing and addressing non-compliance to information security standards; facilitates migration of non-compliant environments to compliant environments. Conducts studies within and outside the organization to ensure compliance with standards and currency with industry security norms. Manages and participates in the planning and implementation of security administration for all IT projects. Responsible for evaluation and selection of security applications and systems. Makes recommendations and assists in the implementation of changes to work methods and procedures to make them more effective or to strengthen security measures. In organizations where customers or vendors access databases/applications, security takes on a higher level of criticality for the protection of corporate intellectual capital.

Breadth:

Middle level management. Works under general direction of senior level management. Manages and mentors supervisors, project leads and/or technical staff. Works on multiple, complex projects as a project leader and subject matter expert. Frequently reports to a Corporate Security Officer, Chief Information Security Officer, Chief Technology Officer or IT Chief Operating Officer.

Minimum Education Requirements:

Minimum Bachelor's Degree in Computer Science, or Information Systems

SYSTEM SOFTWARE PROGRAMMER

Minimum Experience Required:

Minimum 5 years of IT work experience in systems administration and programming required.

Functional Responsibility:

Responsible for the analysis, development, modification, installation, testing and maintenance of operating systems software. Possesses a strong understanding of systems programming, graphical user interfaces and control languages. Evaluates vendor supplied software packages and makes

recommendations to IT management. Modifies and/or debugs vendor-supplied utilities and packages. Modifies, installs and prepares technical documentation for system software applications. Diagnoses, isolates and de-bugs software problems and performs problem resolution. Monitors systems capacity and performance, plans and executes disaster recovery procedures and provides Tier 2 technical support.

Complexity:

Intermediate professional level role. Works on multiple products, activities and projects as a project team member, occasionally as a project leader. Works on moderately complex tasks, projects, activities or support issues that require increased skill in multiple technical environments and has expertise in one product/system. May coach more junior technical staff.

Minimum Education Requirements:

Minimum Bachelor's Degree in Computer Science, Information Systems, or Computer Engineering

UNIX SYSTEM ADMINISTRATOR

Minimum Experience Required:

Minimum 5 years of IT work experience. Requires a high level of expertise in multiple system environments with emphasis in UNIX-based systems required.

Functional Responsibility:

Installs, configures, maintains and performs system integration testing of UNIX based operating systems, related utilities and hardware. Responsible for troubleshooting UNIX-based hardware and software problems. Monitors systems activities and fine tunes system parameters and configuration to optimize performance and ensure security of systems. Performs capacity analysis, monitors and controls usage of disk space. Develops procedures for routine administration including backup/restore, shutdown, and startup. Provides recommendations for improving the server environment, such as capacity thresholds, security gaps, patch levels and hardware recalls.

Complexity:

Intermediate professional level role. Defines procedures for monitoring and evaluates, diagnoses and establishes work plan to resolve system issues. Performs troubleshooting for complex hardware, software and network problems. Works on multiple projects as a project team member, occasionally as a project leader. May coach more junior technical staff.

Minimum Education Requirements:

Minimum Bachelor's Degree in Computer Science, Information Systems, or Computer Engineering

STORAGE MANAGEMENT SPECIALIST

Minimum Experience Required:

Minimum 5 years of IT work experience. Requires a high level of expertise in multiple system environments. Experience with networking, storage and systems administration required.

Functional Responsibility:

Provides efficient and reliable storage allocation and defines backup, recovery, archival procedures. Develops and implements business continuity practices for storage management. Installs, configures, tests and implements storage management software and hardware. Monitors use and availability of storage resources. Maintains and modifies backup and recovery procedures to meet high availability and mission critical business needs. Troubleshoots storage related issues and takes appropriate actions. Generates reports and analysis on storage usage. Maintains storage configurations to provide capacity planning and performance monitoring/tuning of systems. Benchmarks, evaluates and makes recommendations for the selection of storage management software and hardware products. Possesses skills and knowledge related to network, operating

systems, Storage Area Network (SAN), Network Attached Storage (NAS) and tape backup solutions.

Complexity:

Intermediate professional level role. Defines procedures for monitoring and evaluates, diagnoses and establishes work plan to resolve storage management issues. Works on multiple products, activities and projects as a project team member, occasionally as a project leader. May coach more junior technical staff.

Minimum Education Requirements:

Minimum Bachelor's Degree in Computer Science, Information Systems, or Computer Engineering

ENTERPRISE ARCHITECT

Minimum Experience Required:

Minimum 7 years of IT work experience in multiple IT areas and 2 to 3 years of relevant enterprise-wide architecture experience in one or more specialty areas required.

Functional Responsibility:

Provides overall direction, guidance and definition of an enterprise's architecture to effectively support the corporate business strategy. Responsibilities include researching, analyzing, designing, proposing, and delivering solutions that are appropriate for the business and technology strategies. Must have significant business knowledge and have one or more areas of technical expertise in which they concentrate. Interfaces across several business areas, acting as visionary to proactively assist in defining the direction for future projects. Responsible for conception of solutions, building consensus and the selling and execution of such solutions.

Complexity:

Expert/lead technical role. Defines enterprise-wide architectures and designs across multiple IT functional areas. Works on multiple projects as a project leader or as the subject matter expert. Works on highly complex projects that require in-depth knowledge across multiple technical areas and business segments. Coaches and mentors more junior technical staff.

Minimum Education Requirements:

Minimum Bachelor's in Computer Science, Information Systems, or Computer Engineering

CONFIGURATIONS MANAGEMENT ANALYST

Minimum Experience Required:

Minimum 5 years of IT work experience in systems/applications development functions required.

Functional Responsibility:

Provides Configuration Management (CM) support for the customer's software baseline control efforts. Maintains the baseline using automated CM tools. Responsible for maintaining project software and documentation inventory and configuration baselines. Establishes and maintains the CM processes and procedures. Defines and implements procedures for releasing products throughout the whole product life cycle. Serves on the Configuration Control Board (CCB). Produces builds of products for use in testing and in production; identifies and implements processes to strengthen, streamline and automate build processes; serves as an advocate for best practices; drives the development and maintenance of build automation tools; maintains the source code change control; performs distribution partner and corporate client set-ups. Performs software deficiency and change request updates and reporting. Maintains the project notebook library and software development folders. Tracks and maintains the project change requests, impact assessments, incident reports, and software change notices on a continuous basis. Measures and reports on success metrics benchmarking performance against world class measures. Supports management with technical performance data from the CM process.

Complexity:

Intermediate professional level role. Works on multiple products, activities and projects as a project team member, occasionally as a project leader. Works on moderately complex tasks, projects, activities or support issues that require increased skill in multiple technical environments. May coach more junior technical staff.

Minimum Education Requirements:

Minimum Bachelor's Degree in Computer Science, or Information Systems