SGS Technologie wishes to participate under the Cooperative Purchasing program. The following SINs are available to state and local: 54151S, OLM.

**SINs** | **DESCRIPTION**
--- | ---
54151S | Information Technology Professional Services
OLM | Order-Level Materials

FPDS Code D301 IT Facility Operation and Maintenance
FPDS Code D302 IT Systems Development Services
FPDS Code D306 IT Systems Analysis Services
FPDS Code D307 Automated Information Systems Design and Integration Services
FPDS Code D308 Programming Services
FPDS Code D310 IT Backup and Security Services
FPDS Code D311 IT Data Conversion Services
FPDS Code D313 Computer Aided Design/Computer Aided Manufacturing (CAD/CAM) Services
FPDS Code D316 IT Network Management Services
FPDS Code D317 Creation/Retrieval of IT Related Automated News Services, Data Services, or Other Information Services (All other information services belong under Schedule 76)
FPDS Code D399 Other Information Technology Services, Not Elsewhere Classified

Contract Number: **GS35F009AA**

Period Covered by Contract: **October 4, 2017 to October 3, 2022**

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

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

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

SGS Technologie, LLC
6817 Southpoint Parkway, Suite 2104,
Jacksonville, FL 32216
Phone: 904-332-4534
Fax: 904-687-0178
www.sgstechnologies.net

Pricelist current through Modification #2, dated 10/01/2020.

Products and ordering information in this Authorized Information Technology Schedule Pricelist are also available on the GSA Advantage! System (http://www.gsaadvantage.gov).

-END OF INFORMATION-
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INFORMATION FOR ORDERING ACTIVITIES

INFORMATION FOR ORDERING ACTIVITIES
APPLICABLE TO ALL SPECIAL ITEM NUMBERS

SPECIAL NOTICE TO AGENCIES: Small Business Participation

SBA strongly supports the participation of small business concerns in the Federal Acquisition Service. To enhance Small Business Participation SBA policy allows agencies to include in their procurement base and goals, the dollar value of orders expected to be placed against the Federal Supply Schedules, and to report accomplishments against these goals.

For orders exceeding the micropurchase threshold, FAR 8.404 requires agencies to consider the catalogs/pricelists of at least three schedule contractors or consider reasonably available information by using the GSA Advantage™ on-line shopping service (www.gsaadvantage.gov). The catalogs/pricelists, GSA Advantage™ and the Federal Acquisition Service Home Page (www.gsa.gov/fas) contain information on a broad array of products and services offered by small business concerns.

This information should be used as a tool to assist ordering activities in meeting or exceeding established small business goals. It should also be used as a tool to assist in including small, small disadvantaged, and women-owned small businesses among those considered when selecting pricelists for a best value determination.

For orders exceeding the micropurchase threshold, customers are to give preference to small business concerns when two or more items at the same delivered price will satisfy their requirement.

1. GEOGRAPHIC SCOPE OF CONTRACT:

Domestic delivery is delivery within the 48 contiguous states, Alaska, Hawaii, Puerto Rico, Washington, DC, and U.S. Territories. Domestic delivery also includes a port or consolidation point, within the aforementioned areas, for orders received from overseas activities.

Overseas delivery is delivery to points outside of the 48 contiguous states, Washington, DC, Alaska, Hawaii, Puerto Rico, and U.S. Territories.

Offerors are requested to check one of the following boxes:

[ ] The Geographic Scope of Contract will be domestic and overseas delivery.
[ ] The Geographic Scope of Contract will be overseas delivery only.
[X] The Geographic Scope of Contract will be domestic delivery only.

2. CONTRACTOR’S ORDERING ADDRESS AND PAYMENT INFORMATION:

SGS TECHNOLOGIE, LLC
6817 Southpoint Parkway, Suite 2104,
Jacksonville, FL 32216

Contractor must accept the credit card for payments equal to or less than the micro-purchase for oral or written orders under this contract. The Contractor and the ordering agency may agree to use the credit
card for dollar amounts over the micro-purchase threshold (See GSAR 552.232-79 Payment by Credit Card). In addition, bank account information for wire transfer payments will be shown on the invoice.

The following telephone number(s) can be used by ordering activities to obtain technical and/or ordering assistance:

904-332-4534

3. LIABILITY FOR INJURY OR DAMAGE

The Contractor shall not be liable for any injury to ordering activity personnel or damage to ordering activity property arising from the use of equipment maintained by the Contractor, unless such injury or damage is due to the fault or negligence of the Contractor.

4. STATISTICAL DATA FOR GOVERNMENT ORDERING OFFICE COMPLETION OF STANDARD FORM 279:

Block 9: G. Order/Modification Under Federal Schedule Contract
Block 16: Data Universal Numbering System (DUNS) Number: 189752830
Block 30: Type of Contractor: B. Other Small Business
   A. Small Disadvantaged Business
   B. Other Small Business
   C. Large Business
   G. Other Nonprofit Organization
   L. Foreign Contractor

Block 31: Woman-Owned Small Business - No
Block 37: Contractor’s Taxpayer Identification Number (TIN): 54-2092298
Block 40: Veteran Owned Small Business (VOSB): No
   A: Service Disabled Veteran Owned Small Business
   B: Other Veteran Owned Small Business

4a. CAGE Code: 5Z9H6
4b. Contractor has registered with the Central Contractor Registration Database.

5. FOB DESTINATION

6. DELIVERY SCHEDULE

a. TIME OF DELIVERY: The Contractor shall deliver to destination within the number of calendar days after receipt of order (ARO), as set forth below:

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

c. i. **SIN 132-54 and SIN 132-55, ACCELERATED SERVICE DELIVERY (7 calendar days or less):** the time required for COMSATCOM services to be available after order award. Under Accelerated Service Task Orders, service acceptance testing, unless otherwise required by the satellite provider or host nation, shall be deferred until Ordering Activity operations permit.

   ii. **SIN 132-54 and SIN 132-55, TIME-CRITICAL DELIVERY (4 hours or less):** the time required for COMSATCOM services to be available after order award. Under Time-Critical Task Orders, service acceptance testing unless otherwise required by the satellite provider or host nation shall be deferred until Ordering Activity operations permit. Time-Critical Delivery shall be predicated on the availability of COMSATCOM transponded capacity (contracted bandwidth and power, pre-arranged Host Nation Agreements, frequency clearance) or COMSATCOM subscription services (bandwidth, terminals, network resources, etc.).

   iii. For **SIN 132-54 and SIN 132-55, EXTENDED SERVICE DELIVERY TIMES:** the time required under extenuating circumstances for COMSATCOM services to be available after order award. Such extenuating circumstances may include extended time required for host nation agreements or landing rights, or other time intensive service delivery requirements as defined in the individual requirement. Any such extended delivery times will be negotiated between the Ordering Activity and Contractor.

7. **DISCOUNTS:** Prices shown are NET Prices; Basic Discounts have been deducted.
   a. **Prompt Payment:** 0% - ___ days from receipt of invoice or date of acceptance, whichever is later.
   b. **Quantity** None
   c. **Dollar Volume** None
   d. **Other Special Discounts (i.e. Government Education Discounts, etc.)** None

8. **TRADE AGREEMENTS ACT OF 1979, as amended:**

   All items are U.S. made end products, designated country end products, Caribbean Basin country end products, Canadian end products, or Mexican end products as defined in the Trade Agreements Act of 1979, as amended.

9. **STATEMENT CONCERNING AVAILABILITY OF EXPORT PACKING:**

10. **Small Requirements:** The minimum dollar value of orders to be issued is $100.
11. **MAXIMUM ORDER (All dollar amounts are exclusive of any discount for prompt payment.)**

The Maximum Order value for the following Special Item Numbers (SINs) is **$500,000**:

Special Item Number 132-51 - Information Technology Professional Services

12. **ORDERING PROCEDURES FOR FEDERAL SUPPLY SCHEDULE CONTRACTS**

Ordering activities shall use the ordering procedures of Federal Acquisition Regulation (FAR) 8.405 when placing an order or establishing a BPA for supplies or services. These procedures apply to all schedules.

   a. FAR 8.405-1 Ordering procedures for supplies, and services not requiring a statement of work.
   b. FAR 8.405-2 Ordering procedures for services requiring a statement of work.

13. **FEDERAL INFORMATION TECHNOLOGY/TELECOMMUNICATION STANDARDS REQUIREMENTS:**

Ordering activities acquiring products from this Schedule must comply with the provisions of the Federal Standards Program, as appropriate (reference: NIST Federal Standards Index). Inquiries to determine whether or not specific products listed herein comply with Federal Information Processing Standards (FIPS) or Federal Telecommunication Standards (FED-STDs), which are cited by ordering activities, shall be responded to promptly by the Contractor.

13.1 **FEDERAL INFORMATION PROCESSING STANDARDS PUBLICATIONS (FIPS PUBS):** Information Technology products under this Schedule that do not conform to Federal Information Processing Standards (FIPS) should not be acquired unless a waiver has been granted in accordance with the applicable "FIPS Publication." Federal Information Processing Standards Publications (FIPS PUBS) are issued by the U.S. Department of Commerce, National Institute of Standards and Technology (NIST), pursuant to National Security Act. Information concerning their availability and applicability should be obtained from the National Technical Information Service (NTIS), 5285 Port Royal Road, Springfield, Virginia 22161. FIPS PUBS include voluntary standards when these are adopted for Federal use. Individual orders for FIPS PUBS should be referred to the NTIS Sales Office, and orders for subscription service should be referred to the NTIS Subscription Officer, both at the above address, or telephone number (703) 487-4650.

13.2 **FEDERAL TELECOMMUNICATION STANDARDS (FED-STDs):** Telecommunication products under this Schedule that do not conform to Federal Telecommunication Standards (FED-STDs) should not be acquired unless a waiver has been granted in accordance with the applicable "FED-STD." Federal Telecommunication Standards are issued by the U.S. Department of Commerce, National Institute of Standards and Technology (NIST), pursuant to National Security Act. Ordering information and information concerning the availability of FED-STDs should be obtained from the GSA, Federal Acquisition Service, Specification Section, 470 East L’Enfant Plaza, Suite 8100, SW, Washington, DC 20407, telephone number (202)619-8925. Please include a self-addressed mailing label when requesting information by mail. Information concerning their applicability can be obtained by writing or calling the U.S. Department of Commerce, National Institute of Standards and Technology, Gaithersburg, MD 20899, telephone number (301)975-2833.

14. **CONTRACTOR TASKS / SPECIAL REQUIREMENTS (C-FSS-370) (NOV 2003)**
(a) Security Clearances: The Contractor may be required to obtain/possess varying levels of security clearances in the performance of orders issued under this contract. All costs associated with obtaining/possessing such security clearances should be factored into the price offered under the Multiple Award Schedule.

(b) Travel: The Contractor may be required to travel in performance of orders issued under this contract. Allowable travel and per diem charges are governed by Pub. L. 99-234 and FAR Part 31, and are reimbursable by the ordering agency or can be priced as a fixed price item on orders placed under the Multiple Award Schedule. Travel in performance of a task order will only be reimbursable to the extent authorized by the ordering agency. The Industrial Funding Fee does NOT apply to travel and per diem charges.

(c) Certifications, Licenses and Accreditations: As a commercial practice, the Contractor may be required to obtain/possess any variety of certifications, licenses and accreditations for specific FSC/service code classifications offered. All costs associated with obtaining/possessing such certifications, licenses and accreditations should be factored into the price offered under the Multiple Award Schedule program.

(d) Insurance: As a commercial practice, the Contractor may be required to obtain/possess insurance coverage for specific FSC/service code classifications offered. All costs associated with obtaining/possessing such insurance should be factored into the price offered under the Multiple Award Schedule program.

(e) Personnel: The Contractor may be required to provide key personnel, resumes or skill category descriptions in the performance of orders issued under this contract. Ordering activities may require agency approval of additions or replacements to key personnel.

(f) Organizational Conflicts of Interest: Where there may be an organizational conflict of interest as determined by the ordering agency, the Contractor’s participation in such order may be restricted in accordance with FAR Part 9.5.

(g) Documentation/Standards: The Contractor may be requested to provide products or services in accordance with rules, regulations, OMB orders, standards and documentation as specified by the agency’s order.

(h) Data/Deliverable Requirements: Any required data/deliverables at the ordering level will be as specified or negotiated in the agency’s order.

(i) Government-Furnished Property: As specified by the agency’s order, the Government may provide property, equipment, materials or resources as necessary.

(j) Availability of Funds: Many Government agencies’ operating funds are appropriated for a specific fiscal year. Funds may not be presently available for any orders placed under the contract or any option year. The Government’s obligation on orders placed under this contract is contingent upon the availability of appropriated funds from which payment for ordering purposes can be made. No legal liability on the part of the Government for any payment may arise until funds are available to the ordering Contracting Officer.
(k) Overtime: For professional services, the labor rates in the Schedule should not vary by virtue of the Contractor having worked overtime. For services applicable to the Service Contract Act (as identified in the Schedule), the labor rates in the Schedule will vary as governed by labor laws (usually assessed a time and a half of the labor rate).

15. CONTRACT ADMINISTRATION FOR ORDERING ACTIVITIES: Any ordering activity, with respect to any one or more delivery orders placed by it under this contract, may exercise the same rights of termination as might the GSA Contracting Officer under provisions of FAR 52.212-4, paragraphs (l) Termination for the ordering activity’s convenience, and (m) Termination for Cause (See 52.212-4)

16. GSA ADVANTAGE!
GSA Advantage! is an on-line, interactive electronic information and ordering system that provides on-line access to vendors' schedule prices with ordering information. GSA Advantage! will allow the user to perform various searches across all contracts including, but not limited to:

(1) Manufacturer;
(2) Manufacturer’s Part Number; and
(3) Product categories.

Agencies can browse GSA Advantage! by accessing the Internet World Wide Web utilizing a browser (ex.: NetScape). The Internet address is http://www.gsaadvantage.gov

17. PURCHASE OF OPEN MARKET ITEMS
NOTE: Open Market Items are also known as incidental items, noncontract items, non-Schedule items, and items not on a Federal Supply Schedule contract. ODCs (Other Direct Costs) are not part of this contract and should be treated as open market purchases. Ordering Activities procuring open market items must follow FAR 8.402(f).

For administrative convenience, an ordering activity contracting officer may add items not on the Federal Supply Multiple Award Schedule (MAS) -- referred to as open market items -- to a Federal Supply Schedule blanket purchase agreement (BPA) or an individual task or delivery order, only if-

(1) All applicable acquisition regulations pertaining to the purchase of the items not on the Federal Supply Schedule have been followed (e.g., publicizing (Part 5), competition requirements (Part 6), acquisition of commercial items (Part 12), contracting methods (Parts 13, 14, and 15), and small business programs (Part 19));

(2) The ordering activity contracting officer has determined the price for the items not on the Federal Supply Schedule is fair and reasonable;

(3) The items are clearly labeled on the order as items not on the Federal Supply Schedule; and

(4) All clauses applicable to items not on the Federal Supply Schedule are included in the order.

18. CONTRACTOR COMMITMENTS, WARRANTIES AND REPRESENTATIONS
a. For the purpose of this contract, commitments, warranties and representations include, in addition to those agreed to for the entire schedule contract:
(1) Time of delivery/installation quotations for individual orders;

(2) Technical representations and/or warranties of products concerning performance, total system performance and/or configuration, physical, design and/or functional characteristics and capabilities of a product/equipment/service/software package submitted in response to requirements which result in orders under this schedule contract.

(3) Any representations and/or warranties concerning the products made in any literature, description, drawings and/or specifications furnished by the Contractor.

b. The above is not intended to encompass items not currently covered by the GSA Schedule contract.

19. OVERSEAS ACTIVITIES

The terms and conditions of this contract shall apply to all orders for installation, maintenance and repair of equipment in areas listed in the pricelist outside the 48 contiguous states and the District of Columbia, except as indicated below:

None

Upon request of the Contractor, the ordering activity may provide the Contractor with logistics support, as available, in accordance with all applicable ordering activity regulations. Such ordering activity support will be provided on a reimbursable basis, and will only be provided to the Contractor's technical personnel whose services are exclusively required for the fulfillment of the terms and conditions of this contract.

20. BLANKET PURCHASE AGREEMENTS (BPAs)

The use of BPAs under any schedule contract to fill repetitive needs for supplies or services is allowable. BPAs may be established with one or more schedule contractors. The number of BPAs to be established is within the discretion of the ordering activity establishing the BPA and should be based on a strategy that is expected to maximize the effectiveness of the BPA(s). Ordering activities shall follow FAR 8.405-3 when creating and implementing BPA(s).

21. CONTRACTOR TEAM ARRANGEMENTS

Contractors participating in contractor team arrangements must abide by all terms and conditions of their respective contracts. This includes compliance with Clauses 552.238-74, Industrial Funding Fee and Sales Reporting, i.e., each contractor (team member) must report sales and remit the IFF for all products and services provided under its individual contract.

22. INSTALLATION, DEINSTALLATION, REINSTALLATION

The Davis-Bacon Act (40 U.S.C. 276a-276a-7) provides that contracts in excess of $2,000 to which the United States or the District of Columbia is a party for construction, alteration, or repair (including painting and decorating) of public buildings or public works with the United States, shall contain a clause that no laborer or mechanic employed directly upon the site of the work shall received less than the prevailing wage rates as determined by the Secretary of Labor. The requirements of the Davis-Bacon Act do not apply if the construction work is incidental to the furnishing of supplies, equipment, or services. For example, the requirements do not apply to simple installation or alteration of a public...
building or public work that is incidental to furnishing supplies or equipment under a supply contract. However, if the construction, alteration or repair is segregable and exceeds $2,000, then the requirements of the Davis-Bacon Act applies.

The ordering activity issuing the task order against this contract will be responsible for proper administration and enforcement of the Federal labor standards covered by the Davis-Bacon Act. The proper Davis-Bacon wage determination will be issued by the ordering activity at the time a request for quotations is made for applicable construction classified installation, deinstallation, and reinstallation services under SIN 132-8 or 132-9.

23. **SECTION 508 COMPLIANCE.**

If applicable, Section 508 compliance information on the supplies and services in this contract are available in Electronic and Information Technology (EIT) at the following: [www.tscti.com](http://www.tscti.com)

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

Applicable to only certain services.

24. **PRIME CONTRACTOR ORDERING FROM FEDERAL SUPPLY SCHEDULES.**

Prime Contractors (on cost reimbursement contracts) placing orders under Federal Supply Schedules, on behalf of an ordering activity, shall follow the terms of the applicable schedule and authorization and include with each order—

(a) A copy of the authorization from the ordering activity with whom the contractor has the prime contract (unless a copy was previously furnished to the Federal Supply Schedule contractor); and

(b) The following statement:

This order is placed under written authorization from _______ dated _______. In the event of any inconsistency between the terms and conditions of this order and those of your Federal Supply Schedule contract, the latter will govern.

25. **INSURANCE—WORK ON A GOVERNMENT INSTALLATION (JAN 1997)(FAR 52.228-5)**

(a) The Contractor shall, at its own expense, provide and maintain during the entire performance of this contract, at least the kinds and minimum amounts of insurance required in the Schedule or elsewhere in the contract.

(b) Before commencing work under this contract, the Contractor shall notify the Contracting Officer in writing that the required insurance has been obtained. The policies evidencing required insurance shall contain an endorsement to the effect that any cancellation or any material change adversely affecting the Government's interest shall not be effective—

(1) For such period as the laws of the State in which this contract is to be performed prescribe; or

(2) Until 30 days after the insurer or the Contractor gives written notice to the Contracting Officer, whichever period is longer.

(c) The Contractor shall insert the substance of this clause, including this paragraph (c), in subcontracts under this contract that require work on a Government installation and shall require
subcontractors to provide and maintain the insurance required in the Schedule or elsewhere in the contract. The Contractor shall maintain a copy of all subcontractors' proofs of required insurance, and shall make copies available to the Contracting Officer upon request.

26. SOFTWARE INTEROPERABILITY.

Offerors are encouraged to identify within their software items any component interfaces that support open standard interoperability. An item’s interface may be identified as interoperable on the basis of participation in a Government agency-sponsored program or in an independent organization program. Interfaces may be identified by reference to an interface registered in the component registry located at http://www.core.gov.

27. ADVANCE PAYMENTS

A payment under this contract to provide a service or deliver an article for the United States Government may not be more than the value of the service already provided or the article already delivered. Advance or pre-payment is not authorized or allowed under this contract. (31 U.S.C. 3324)
TERMS AND CONDITIONS APPLICABLE TO IT PROFESSIONAL SERVICES

TERMS AND CONDITIONS APPLICABLE TO INFORMATION TECHNOLOGY (IT) PROFESSIONAL SERVICES
(SPECIAL ITEM NUMBER 132-51)

1. SCOPE
   a. The prices, terms and conditions stated under Special Item Number 132-51 Information Technology Professional Services apply exclusively to IT Professional Services within the scope of this Information Technology Schedule.
   b. The Contractor shall provide services at the Contractor’s facility and/or at the ordering activity location, as agreed to by the Contractor and the ordering activity.

2. PERFORMANCE INCENTIVES I-FSS-60 Performance Incentives (April 2000)
   a. Performance incentives may be agreed upon between the Contractor and the ordering activity on individual fixed price orders or Blanket Purchase Agreements under this contract.
   b. The ordering activity must establish a maximum performance incentive price for these services and/or total solutions on individual orders or Blanket Purchase Agreements.
   c. Incentives should be designed to relate results achieved by the contractor to specified targets. To the maximum extent practicable, ordering activities shall consider establishing incentives where performance is critical to the ordering activity’s mission and incentives are likely to motivate the contractor. Incentives shall be based on objectively measurable tasks.

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

4. PERFORMANCE OF SERVICES
   a. The Contractor shall commence performance of services on the date agreed to by the Contractor and the ordering activity.
   b. The Contractor agrees to render services only during normal working hours, unless otherwise agreed to by the Contractor and the ordering activity.
c. The ordering activity should include the criteria for satisfactory completion for each task in the Statement of Work or Delivery Order. Services shall be completed in a good and workmanlike manner.

d. Any Contractor travel required in the performance of IT Services must comply with the Federal Travel Regulation or Joint Travel Regulations, as applicable, in effect on the date(s) the travel is performed. Established Federal Government per diem rates will apply to all Contractor travel. Contractors cannot use GSA city pair contracts.

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

(a) The Contracting Officer may, at any time, by written order to the Contractor, require the Contractor to stop all, or any part, of the work called for by this contract for a period of 90 days after the order is delivered to the Contractor, and for any further period to which the parties may agree. The order shall be specifically identified as a stop-work order issued under this clause. Upon receipt of the order, the Contractor shall immediately comply with its terms and take all reasonable steps to minimize the incurrence of costs allocable to the work covered by the order during the period of work stoppage. Within a period of 90 days after a stop-work is delivered to the Contractor, or within any extension of that period to which the parties shall have agreed, the Contracting Officer shall either-

(1) Cancel the stop-work order; or

(2) Terminate the work covered by the order as provided in the Default, or the Termination for Convenience of the Government, clause of this contract.

(b) If a stop-work order issued under this clause is canceled or the period of the order or any extension thereof expires, the Contractor shall resume work. The Contracting Officer shall make an equitable adjustment in the delivery schedule or contract price, or both, and the contract shall be modified, in writing, accordingly, if-

(1) The stop-work order results in an increase in the time required for, or in the Contractor's cost properly allocable to, the performance of any part of this contract; and

(2) The Contractor asserts its right to the adjustment within 30 days after the end of the period of work stoppage; provided, that, if the Contracting Officer decides the facts justify the action, the Contracting Officer may receive and act upon the claim submitted at any time before final payment under this contract.

(c) If a stop-work order is not canceled and the work covered by the order is terminated for the convenience of the Government, the Contracting Officer shall allow reasonable costs resulting from the stop-work order in arriving at the termination settlement.

(d) If a stop-work order is not canceled and the work covered by the order is terminated for default, the Contracting Officer shall allow, by equitable adjustment or otherwise, reasonable costs resulting from the stop-work order.
6. **INSPECTION OF SERVICES**


7. **RESPONSIBILITIES OF THE CONTRACTOR**

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

8. **RESPONSIBILITIES OF THE ORDERING ACTIVITY**

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

9. **INDEPENDENT CONTRACTOR**

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

10. **ORGANIZATIONAL CONFLICTS OF INTEREST**

a. **Definitions.**

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

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

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

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

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

12. **PAYMENTS**

For firm-fixed price orders the ordering activity shall pay the Contractor, upon submission of proper invoices or vouchers, the prices stipulated in this contract for service rendered and accepted. Progress payments shall be made only when authorized by the order. For time-and-materials orders, the Payments under Time-and-Materials and Labor-Hour Contracts at FAR 52.212-4 (MAR 2009) (ALTERNATE I – OCT 2008) (DEVIAIION 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) (DEVIAIION I – FEB 2007) applies to labor-hour orders placed under this contract. 52.216-31(Feb 2007) Time-and-Materials/Labor-Hour Proposal Requirements—Commercial Item Acquisition As prescribed in 16.601(e)(3), insert the following provision:

(a) The Government contemplates award of a Time-and-Materials or Labor-Hour type of contract resulting from this solicitation.

(b) The offeror must specify fixed hourly rates in its offer that include wages, overhead, general and administrative expenses, and profit. The offeror must specify whether the fixed hourly rate for each labor category applies to labor performed by—

1) The offeror;

2) Subcontractors; and/or

3) Divisions, subsidiaries, or affiliates of the offeror under a common control.

13. **RESUMES**

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

14. **INCIDENTAL SUPPORT COSTS**

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

15. **APPROVAL OF SUBCONTRACTS**

The ordering activity may require that the Contractor receive, from the ordering activity's Contracting Officer, written consent before placing any subcontract for furnishing any of the work called for in a task order.
16. DESCRIPTION OF IT PROFESSIONAL SERVICES AND PRICING

a. The Contractor shall provide a description of each type of IT Service offered under Special Item Numbers 132-51 IT Professional Services should be presented in the same manner as the Contractor sells to its commercial and other ordering activity customers. If the Contractor is proposing hourly rates, a description of all corresponding commercial job titles (labor categories) for those individuals who will perform the service should be provided.

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

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

-END OF INFORMATION-
USA COMMITMENT TO PROMOTE SMALL BUSINESS PARTICIPATION

PREAMBLE

SGS Technologie LLC provides commercial products and services to ordering activities. We are committed to promoting participation of small, small disadvantaged and women-owned small businesses in our contracts. We pledge to provide opportunities to the small business community through reselling opportunities, mentor-protégé programs, joint ventures, teaming arrangements, and subcontracting.

COMMITMENT

To actively seek and partner with small businesses.

To identify, qualify, mentor and develop small, small disadvantaged and women-owned small businesses by purchasing from these businesses whenever practical.

To develop and promote company policy initiatives that demonstrate our support for awarding contracts and subcontracts to small business concerns.

To undertake significant efforts to determine the potential of small, small disadvantaged and women-owned small business to supply products and services to our company.

To insure procurement opportunities are designed to permit the maximum possible participation of small, small disadvantaged, and women-owned small businesses.

To attend business opportunity workshops, minority business enterprise seminars, trade fairs, procurement conferences, etc., to identify and increase small businesses with whom to partner.

To publicize in our marketing publications our interest in meeting small businesses that may be interested in subcontracting opportunities.

We signify our commitment to work in partnership with small, small disadvantaged and women-owned small businesses to promote and increase their participation in ordering activity contracts. To accelerate potential opportunities please contact Arun Venkatesan, (904) 332-4534 x 340, arun@sgstechnologies.net, (904) 687-0178.

-END OF INFORMATION-
BLANKET PURCHASE AGREEMENT

BEST VALUE
BLANKET PURCHASE AGREEMENT
FEDERAL SUPPLY SCHEDULE

(Insert Customer Name)

In the spirit of the Federal Acquisition Streamlining Act (ordering activity) and (Contractor) enter into a cooperative agreement to further reduce the administrative costs of acquiring commercial items from the General Services Administration (GSA) Federal Supply Schedule Contract(s) ________________.

Federal Supply Schedule contract BPAs eliminate contracting and open market costs such as: search for sources; the development of technical documents, solicitations and the evaluation of offers. Teaming Arrangements are permitted with Federal Supply Schedule Contractors in accordance with Federal Acquisition Regulation (FAR) 9.6.

This BPA will further decrease costs, reduce paperwork, and save time by eliminating the need for repetitive, individual purchases from the schedule contract. The end result is to create a purchasing mechanism for the ordering activity that works better and costs less.

Signatures

Ordering Activity  Date  Contractor  Date
BLANKET PURCHASE AGREEMENT

Pursuant to GSA Federal Supply Schedule Contract Number(s)____________, Blanket Purchase Agreements, the Contractor agrees to the following terms of a Blanket Purchase Agreement (BPA) EXCLUSIVELY WITH (ordering activity):

(1) The following contract items can be ordered under this BPA. All orders placed against this BPA are subject to the terms and conditions of the contract, except as noted below:

<table>
<thead>
<tr>
<th>MODEL NUMBER/PART NUMBER</th>
<th>*SPECIAL BPA DISCOUNT/PRICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>________________________</td>
<td>________________________</td>
</tr>
<tr>
<td>________________________</td>
<td>________________________</td>
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<tr>
<td>________________________</td>
<td>________________________</td>
</tr>
</tbody>
</table>

(2) Delivery:

<table>
<thead>
<tr>
<th>DESTINATION</th>
<th>DELIVERY SCHEDULES / DATES</th>
</tr>
</thead>
<tbody>
<tr>
<td>________________________</td>
<td>________________________</td>
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<tr>
<td>________________________</td>
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<tr>
<td>________________________</td>
<td>________________________</td>
</tr>
</tbody>
</table>

(3) The ordering activity estimates, but does not guarantee, that the volume of purchases through this agreement will be ________________________.

(4) This BPA does not obligate any funds.

(5) This BPA expires on _________________ or at the end of the contract period, whichever is earlier.

(6) The following office(s) is hereby authorized to place orders under this BPA:

<table>
<thead>
<tr>
<th>OFFICE</th>
<th>POINT OF CONTACT</th>
</tr>
</thead>
<tbody>
<tr>
<td>________________________</td>
<td>________________________</td>
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<tr>
<td>________________________</td>
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<tr>
<td>________________________</td>
<td>________________________</td>
</tr>
</tbody>
</table>

(7) Orders will be placed against this BPA via Electronic Data Interchange (EDI), FAX, or paper.

(8) Unless otherwise agreed to, all deliveries under this BPA must be accompanied by delivery tickets or sales slips that must contain the following information as a minimum:

(a) Name of Contractor;
(b) Contract Number;
(c) BPA Number;
(d) Model Number or National Stock Number (NSN);
(e) Purchase Order Number;
(f) Date of Purchase;
(g) Quantity, Unit Price, and Extension of Each Item (unit prices and extensions need not be shown when incompatible with the use of automated systems; provided, that the invoice is itemized to show the information); and
(h) Date of Shipment.

(9) The requirements of a proper invoice are specified in the Federal Supply Schedule contract. Invoices will be submitted to the address specified within the purchase order transmission issued against this BPA.

(10) The terms and conditions included in this BPA apply to all purchases made pursuant to it. In the event of an inconsistency between the provisions of this BPA and the Contractor’s invoice, the provisions of this BPA will take precedence.

- END OF INFORMATION -
CONTRACTOR TEAM ARRANGEMENTS GUIDELINES

BASIC GUIDELINES FOR USING “CONTRACTOR TEAM ARRANGEMENTS”

Federal Supply Schedule Contractors may use “Contractor Team Arrangements” (see FAR 9.6) to provide solutions when responding to a ordering activity requirements.

These Team Arrangements can be included under a Blanket Purchase Agreement (BPA). BPAs are permitted under all Federal Supply Schedule contracts.

Orders under a Team Arrangement are subject to terms and conditions or the Federal Supply Schedule Contract.

Participation in a Team Arrangement is limited to Federal Supply Schedule Contractors.

Customers should refer to FAR 9.6 for specific details on Team Arrangements.

Here is a general outline on how it works:

• The customer identifies their requirements.
• Federal Supply Schedule Contractors may individually meet the customers needs, or -
• Federal Supply Schedule Contractors may individually submit a Schedules “Team Solution” to meet the customer’s requirement.
• Customers make a best value selection.

-END OF INFORMATION-
# PRICE LIST

Prices Shown herein are Net (Discount Deducted)

<table>
<thead>
<tr>
<th>SIN(s) PROPOSED</th>
<th>SERVICE PROPOSED (e.g. Job Title/Task)</th>
<th>PRICE OFFERED TO GSA (including IFF)</th>
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<tbody>
<tr>
<td></td>
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<td>Entry</td>
</tr>
<tr>
<td>132-51</td>
<td>Director Systems and Programming</td>
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<tr>
<td>132-51</td>
<td>Mgmt. Applications Development</td>
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<td>132-51</td>
<td>Applications Architect</td>
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<td>132-51</td>
<td>Enterprise Application Integration (EA) Engineer</td>
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<td>Salary 2</td>
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<td>Technical Product Support Specialist</td>
<td>$42.33</td>
</tr>
</tbody>
</table>

- END OF INFORMATION -
JOB TITLE DESCRIPTIONS

Director, Systems and Programming

General Characteristics
Responsible for the full systems development life cycle management of projects/programs. Provides direction for technical and business resources. Actively participates in long-range strategy planning and manages policy development to address complex business issues, provides leadership to cross-functional teams. Serves as the primary point of contact from project/program inception to delivery. Defines and develops project management infrastructure, manages a methodology driven quality plan, monitors and controls the quality of the deliverable, as well as manages the project completion process through customer acceptance. Works with business unit managers and forms alliances on projects, operational decisions, scheduling requirements/conflicts and vendor contract clarification.

Dimensions Education:
Bachelor’s or Master’s Degree in Computer Science, Information Systems, or other related field. Or equivalent work experience.

Experience:
Typically has 10 to 15 years of IT and business/industry work experience, with at least 3 years of leadership experience in managing multiple, large, cross-functional teams or projects, and influencing senior level management and key stakeholders. Requires advanced technical and business knowledge in software development life cycle, quality assurance, project management and other related disciplines/processes.

Breadth:
Senior level management in systems analysis and applications development. Has overall responsibility for department decisions and management. Provides strategic direction, coaches and mentors more junior management staff and/or senior technical staff. Accountable for IT functional/departmental results. Frequently reports to a Chief Information Officer or Chief Technology Officer.

Manager, Applications Development

General Characteristics
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.

Dimensions Education:
Bachelor’s Degree in Computer Science, Information Systems, or other related field. Or equivalent work experience.
Experience:
Typically has 7 to 10 years of IT and business work experience including managing team(s) in systems analysis and/or programming functions.

Breadth:
Middle level management in systems analysis and programming functions. Typically 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.

Applications Architect

General Characteristics
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.

Dimensions Education:
Bachelor’s or Master’s Degree in Computer Science, Information Systems, or other related field. Or equivalent work experience.

Experience:
Typically has 7 to 10 years of experience in multiple IT areas and 2–3 years of relevant architecture experience. Requires advanced to expert level knowledge and understanding of architecture, applications systems design and integration.

Complexity:
Expert/lead technical role. Typically 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.

Enterprise Application Integration (EAI) Engineer

General Characteristics
Responsible for developing and deploying integrated solutions aimed at modernizing, consolidating and coordinating the independently designed applications within and across the enterprises. Determines
how existing applications, legacy systems, databases, Web interfaces and/or hardware logic, which may be currently operating on multiple platforms, work together to meet the new and emerging enterprise requirements. Develops methods to efficiently reuse existing components. Works with users to gather business requirements, performs database analysis, codes and tests middleware routines to ensure successful and seamless communication among the various IT systems and applications components. Participates in component and data architecture design, software product evaluation and buy vs. build recommendations.

Possesses skills and knowledge of Enterprise Application Integration (EAI) methodologies and processes such as object-oriented programming, distributed, cross-platform program communication using message brokers with Common Object Request Broker Architecture, enterprise-wide content and data distribution using common databases and data standards implemented with the Extensible Markup Language (XML), middleware applications and message queuing approaches.

**Dimensions Education:**
Bachelor’s or Master’s Degree in Computer Science, Information Systems, or other related field. Or equivalent work experience.

**Experience:**
Typically has 5 to 7 years of programming/systems analysis experience with emphasis in applications and systems architectural design and development, database and middleware technologies.

**Complexity:**
Advanced professional level role. Works on projects that may span a broad range of systems and enterprise-wide complex components. Requires in-depth knowledge across multiple technical environments and possesses increased level of business knowledge. Works on major projects providing subject matter expertise and technical direction to more junior technical staff.

**Systems Analyst**

**General Characteristics**
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.

**Dimensions Education:**
Bachelor’s Degree in Computer Science, Information Systems, or other related field. Or equivalent work experience.

**Experience:**
Typically has 3 to 5 years of systems analysis/programming experience.

**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. Works on one or more projects as a project team member or sometimes as a project lead. May coach more junior technical staff.

**Applications Development Analyst**

**General Characteristics**

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.

**Dimensions Education:**
Bachelor’s Degree in Computer Science, Information Systems or other related field. Or equivalent work experience.

**Experience:**
Typically has 2 to 5 years of programming/systems analysis experience.

**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. May coach more junior technical staff.

**Database Manager**

**General Characteristics**
Responsible for ensuring the design, maintenance and implementation of database management systems, which provides the organization with orderly methods of data storage and controlled access to data.

Possesses the technical expertise to provide leadership and manage the design and development of the organization’s database environment. Ensures the design and installation of database management system applications and the establishment of the appropriate linkages to existing database applications and to other data processing systems. Ensures the development of a backup and recovery scheme for the database environment and the development and implementation of disaster recovery and business continuance procedures.

**Dimensions Education:**
Bachelor’s Degree in Computer Science, Information Systems, or other related field. Or equivalent work experience.

**Experience:**
Typically has 7 to 10 years of experience in development, implementation and maintenance of database management systems across multiple platforms. Requires prior management, supervisory or team leader experience including project management experience.

**Breadth:**
Middle level management in database management and administration functions. Works under general direction of senior level management. Typically manages and mentors supervisors, project leaders and/or technical staff. Frequently reports to a Chief Technology Officer, IT Chief Operating Officer, Director, Systems and Programming, Operating Unit IT Executive or Departmental IT Executive.

**Data Architect**

**General Characteristics**
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.

**Dimensions Education:**
Bachelor’s or Master’s Degree in Computer Science, Information Systems, or other related field. Or equivalent work experience.

**Experience:**
Typically has 7 to 10 years of experience with large and complex database management systems.

**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.

**Data Modeler**

**General Characteristics**
Accountable for analyzing and developing complex logical database designs, logical data models and relational data definitions in support of corporate and customer information systems requirements.
Understands the methodologies and technologies that depict the flow of data within and between technology systems and business functions/operations. Responsible for the identification and resolution of information flow, content issues and the transformation of business requirements into logical data models. This position identifies opportunities to reduce data redundancy, trends in data uses and single sources of data.

**Dimensions Education:**
Bachelor’s Degree in Computer Science, Information Systems, or other related field. Or equivalent work experience.

**Experience:**
Typically has 4 to 6 years of IT work experience in data modeling, data analysis, relational DBMS design and support and relevant computing environments.

**Complexity:**
Intermediate professional level role. Designs logical data models of low to medium complexity. Works on small to large, complex projects that require increased skill in multiple technical environments. Works on one or more projects as a project team member or sometimes as a project lead. May coach more junior technical staff.

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**Database Analyst**

**General Characteristics**
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.

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.

**Dimensions Education:**
Bachelor’s Degree in Computer Science, Information Systems, or other related field. Or equivalent work experience.

**Experience:**
Typically has 3 to 5 years of IT work experience in DBA, DBMS design and support and relevant computing environments.

**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.
Database Administrator

General Characteristics
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.

Dimensions Education:
Bachelor’s Degree in Computer Science, Information Systems, or other related field. Or equivalent work experience.

Experience:
Typically has 3 to 5 years of experience working with various database management systems in database design, testing, implementation, maintenance and administration in a multiple platform environment.

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.

Manager, Quality Assurance

General Characteristics
Responsible for managing the definition, implementation and integration of quality principles and quality processes into the design and development of software and IT processes. Ensures that quality methods and procedures are executed. Ensures that products, applications, and systems are in compliance with established quality standards, and meet customer requirements. Analyzes best-in-class processes, establishes customer satisfaction metrics, understands the interaction and relationship of business operations and operating systems and network processes. Champions the application of quality principles in business and IT processes through training, meeting and team facilitation, communication programs and team building activities. Responsible for researching, developing and implementing testing methods and procedures. Ensures that products meet the highest quality standards. Monitors and reports on defects.

Dimensions Education:
Bachelor’s Degree in Computer Science, Information Systems, or other related field. Or equivalent work experience.

Experience:
Typically has 7 to 10 years of systems development and business experience. Experience in developing and conducting test processes for multiple types of systems, client users and/or units across an organization. Requires prior management, supervisory or team leader experience.

**Breadth:**
Middle level management in quality assurance functions. Works under general direction of senior level management. Typically manages and mentors supervisors, project leaders and/or technical staff. Acts as a project leader and a subject matter expert on multiple and complex projects. Frequently reports to a IT Chief Operating Officer, Operating Unit IT Executive, Departmental IT Executive or Director, Systems and Programming.

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**Quality Engineering Consultant**

**General Characteristics**
Responsible for establishing and implementing quality assurance and compliance processes for the IT organization. Works closely with IT leaders to develop and implement an overall quality maturity roadmap and plan for each IT functional area. Works with development, testing and production teams to develop, publish and implement software quality assurance plans. Reviews progress toward the plan regularly with IT leaders, technical teams and customers to make modifications as necessary. Establishes internal IT service quality control standards, policies and procedures. Monitors, evaluates, manages and executes audit processes to ensure compliance. Coordinates and facilitates quality assurance activities across projects with project managers. Provides guidance and subject matter expertise to IT teams on QA methodologies and processes, educates them on their responsibilities/accountabilities for the purpose of achieving on-time and quality deliverables. Makes recommendations and directs improvements to the software development lifecycle process. Documents non-compliance to policies, process and standards and assists in their resolution.

Analyzes and identifies trends in IT performance metrics. Designs, monitors and analyzes performance metrics program for quality improvement initiatives. Conducts audits and analyzes findings to develop appropriate corrective action recommendations. Provides training on established processes and policies. Needed skills and knowledge include systems lifecycle development, project management, quality management and improvement methodologies and standards such as Total Quality Management (TQM), Six Sigma and the Software Engineering Institute—Capability Maturity Model (SEI-CMM).

**Dimensions Education:**
Bachelor’s or Master’s Degree in Computer Science, Information Systems, Business Administration, or other related field. Or equivalent work experience.

**Experience:**
Typically has 7 to 10 years of IT and business experience, with at least 5 years in Quality Assurance, 2 to 3 years of audit or assessment or other relevant experience.

**Complexity:**
Expert/lead technical role. Provides strategic direction, guidance and integrated solutions to enterprise-wide quality engineering initiatives. 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.
**Quality Assurance Analyst**

**General Characteristics**
Responsibility involves developing and executing formal test plans to ensure the delivery of quality software applications. Involves 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.

**Dimensions Education:**
Bachelor’s Degree in Computer Science, Information Systems, or similar. Or equivalent work experience.

**Experience:**
Typically has 3 to 5 years of systems development, testing and/or business experience.

**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.

**Manager, Technology Research**

**General Characteristics**
Understands the strategic direction of enterprise and the supporting IT systems and architectures. Maintains knowledge of emerging technological trends and utilizes this knowledge to educate both IT and the business on opportunities to build better IT solutions that support and drive business decisions. Assists in the definition of the architecture and technology needs of the organization based on new and emerging technologies, and establishes priorities and strategies consistent with business goals and economic viability. Establishes foundation architecture for organization to standardize on hardware and software usage. Serves as a consultant and advisor to senior IT leadership on advanced technologies and evaluates the business impact through cost/benefit analysis. Recommends and incorporates technology with long-term business plans.

Transfers knowledge of key learnings throughout the enterprise, and establishes and communicates strategic and technological plans.

**Dimensions Education:**
Bachelor’s Degree in Computer Science, Information Systems, or other related field. Or equivalent work experience.
Experience:
Typically has 7 to 10 years of IT work experience including managing team(s) responsible for systems development and architecture functions.

Breadth:
Middle level management in technology research area. Works under general direction from senior level management. Works on multiple programs as a project team leader and a subject matter expert. Manages and mentors supervisors, project leaders and/or technical staff. Frequently reports to a Chief Technology Officer, Operating Unit IT Executive or Departmental IT Executive.

Technology Research Analyst

General Characteristics
Maintains a strong understanding of the enterprise’s IT systems and architectures. Assists in the analysis of the requirements for the enterprise and applying emerging technologies to support long-term business objectives. Responsible for researching, collecting, and disseminating information on emerging technologies and key learnings throughout the enterprise. Researches and recommends changes to foundation architecture. Supports research projects to identify and evaluate emerging technologies. Interfaces with users and staff to evaluate possible implementation of the new technology in the enterprise, consistent with the goal of improving existing systems and technologies and in meeting the needs of the business. Analyzes and researches process of deployment and assists in this process.

Dimensions Education:
Bachelor’s Degree in Computer Science, Information Systems, or other related field. Or equivalent work experience.

Experience:
Typically has 3 to 5 years of IT work experience in architecture design, systems analysis and development.

Complexity:
Intermediate professional level role. Works on projects of moderate to high complexity across multiple computing environments. Works on multiple projects as a project team member. May coach more junior technical staff.

Manager, Client Technologies

General Characteristics
Responsible for providing IT users with desktop equipment and support, determining user needs and incorporating them into the design and overall plan for desktop support. The range of accountabilities minimally covers hardware and software planning, vendor selection, acquisition, Tier 2 problem resolution, set-up, integration, testing and installation. Works with organizations supported to establish performance metrics to ensure needs are being properly met. Monitors and analyzes performance metrics, sharing results with users. Organizes and coordinates the activities associated with installation, deployment and upgrade of software, hardware and network facilities as it relates to the desktop environment. Desktop applications may include productivity tools, email, and applications that are used by groups without programming customization.
Evaluates and provides techniques for increasing user desktop productivity.

**Dimensions Education:**
Bachelor’s Degree in Computer Science, Information Systems, or other related field. Or equivalent work experience.

**Experience:**
Typically has 7 to 10 years of IT work experience including managing team(s) responsible for desktop support function. Experience in managing support operation in a 24x7, multi-site environment. Experience with budgeting, expense management and contract management.

**Breadth:**
Middle level management in PC/desktop support and maintenance functions. Works under general direction of senior level management. Typically manages and mentors supervisors, project leaders and/or technical staff. Frequently reports to an IT Chief Operating Officer, Operating Unit IT Executive or Departmental IT Executive.

**Client Technologies Analyst**

**General Characteristics**
Configures, installs, monitors and maintains IT users’ desktop software and hardware; supports mobile workforce. Provides consultation to IT users for all aspects of end-user computing and desktop-based LAN systems software. Provides technical support and guidance through Tier 2 support and works with vendors to resolve Tier 3 issues. Responsible for documenting solutions to problems and developing end-user guidelines. May provide on-site training to users. Evaluates, maintains, modifies (e.g., creates macros, templates) and documents desktop application packages, participates in the testing and evaluation of new desktop packages and implements prototypes. Consults with and makes recommendations to IT users on selection of hardware and software products to address business requirements.

**Dimensions Education:**
Bachelor’s Degree in Computer Science, Information Systems, or other related field. Or equivalent work experience.

**Experience:**
Typically has 3 to 5 years of IT work experience in supporting desktop software and hardware products and problem solving/troubleshooting.

**Complexity:**
Intermediate professional level role. Provides maintenance and support for moderately complex to complex client products. Works on one or more projects concurrently as a project team member. May coach more junior technical staff.
Client Technologies Technician

General Characteristics
Configures and installs software for IT users’ desktops and laptops. Involved in the installation and rollout of new software packages, upgrades and new desktop hardware. Maintains desktop software and hardware; supports mobile workforce. Provides Tier 2 support to IT users for basic software and hardware of end-user computing and desktop-based LAN systems. Troubleshoots problems using scripts and checklists as guides. Escalates to Tier 3 support when necessary. Documents problems and resolutions. May perform end-user training. Strong customer service skills are important in this position. Participates in the testing and evaluation of new desktop packages and implements prototypes.

Dimensions Education:
Associate’s or Bachelor’s Degree, or technical institute degree/certificate. Or equivalent work experience.

Experience:
Typically has 1 to 2 years of IT work experience with demonstrated working knowledge of the basic hardware and software products and problem solving/troubleshooting skills.

Complexity:
Learner/entry level role. Provides maintenance and support for basic client products, peripherals, network and physical moves. Works on one project at a time as a project team member. Functions, somewhat independently, under direction of senior technician or supervisor/manager. Generally follows documented procedures and checklists.

Manager, Customer Support

General Characteristics
Defines service levels, service agreements and manages the help desk operation. Establishes processes to identify, track, escalate, resolve and report customer problems. Jointly, with the customer, defines standards and measures for quality and customer satisfaction requirements. Analyzes the technical performance and reliability of products, systems and services against identified industry standards to ensure customer satisfaction. Responsible for developing and implementing technical service restorations and troubleshooting procedures for identifying, testing and diagnosing computer system and peripheral equipment faults.

Dimensions Education:
Bachelor’s Degree in Computer Science, Information Systems, or other related field. Or equivalent work experience.

Experience:
Typically has 7 to 10 years of IT work experience including managing team(s) responsible for desktop support, customer service and/or production support in multi-platform environments.

Breadth:
Middle level management in help desk/customer support functions. Works under general direction of senior level management. Typically manages and mentors supervisors, project leaders and/or technical staff.
Frequently reports to an IT Chief Operating Officer, Operating Unit IT Executive or Departmental IT Executive.

**Customer Support Analyst**

**General Characteristics**
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 typical 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.

**Dimensions Education:**
Bachelor’s Degree in Computer Science, Information Systems, or other related field. Or equivalent work experience.

**Experience:**
Typically has 2 to 5 years of IT work experience with demonstrated working knowledge of basic to moderately complex hardware and software products and problem solving/troubleshooting skills.

**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.

**Customer Support Technician**

**General Characteristics**
Responsible for Tier I software and hardware support. Diagnoses and resolves problems using documented procedures and checklists in the performance of most responsibilities. Enters call data into a tracking system. Escalates problems to higher level technical support professionals when necessary. Assists in the resolution of application, hardware and software problems.

**Dimensions Education:**
Associate’s or Bachelor’s Degree, or technical institute degree/certificate in Computer Science, Information Systems, or other related field. Or equivalent work experience.

**Experience:**
Typically has 1 to 2 years of IT work experience in computer systems or support with demonstrated working knowledge of basic hardware and software products and problem solving/troubleshooting skills.

**Complexity:**
Learner/entry level role. Provides Tier 1 support of low to medium complexity. Functions, somewhat independently, under general direction of more senior customer service representatives, supervisors or managers. Generally follows documented procedures and checklists.
**Director, Network Operations**

**General Characteristics**
Responsible for developing business and technology standards and best practices for department. Overall responsibility for all network operations work, including the integration of new network technologies such as wireless. Develops enterprise service levels for data and voice networking equipment and for both in-house and third party software applications. Oversees development of procedures and processes for enterprise network operations. Responsible for ensuring that the enterprise has the capability to support new technologies and maintain high levels of network performance and reliability.

**Dimensions Education:**
Bachelor’s or Master’s Degree in Computer Science, Information Systems, or other related field. Or equivalent work experience.

**Experience:**
Typically has 10 to 15 years of IT and business/industry work experience, with at least 3 years of leadership experience in managing multiple, large, cross-functional teams or projects, and influencing senior level management and key stakeholders. Experience in areas such as data communications software and hardware, network administration, support and maintenance.

**Breadth:**
Senior level management in network operations and management functions. Has overall responsibility for department decisions and management. Provides strategic direction, coaches and mentors more junior management staff. Accountable for IT functional/departmental results. Frequently reports to a Chief Information Officer or IT Chief Operating Officer.

**Manager, Network Operations**

**General Characteristics**
Responsible for network operations and service levels for data and voice networking equipment and software including mainframe equipment, PBX, mid-range and network processing devices. Develops and implements standards, procedures, and processes for the network operations group. Plans and manages the support of new technologies (including wireless), network performance, and reliability.

Defines and negotiates service level agreements. Oversees and coordinates the daily activities of the network operations center. Plans for human resources, equipment arrangements, electrical power and cable requirements for telecommunications and information processing equipment.

**Dimensions Education:**
Bachelor’s Degree in Computer Science, Information Systems, or other related field. Or equivalent work experience.

**Experience:**
Typically has 7 to 10 years of IT work experience including managing team(s) responsible for technical service for hardware/software engineering, support and maintenance in LAN/WAN and multi-platform environment.
Breadth:
Middle level management in network operations functions. Works under general direction of senior level management. Typically manages and mentors supervisors, project leaders and/or technical staff. Frequently reports to an IT Chief Operating Officer, Director, Network Operations or Operating Unit IT Executive.

Network Architect

General Characteristics
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.

Dimensions Education:
Bachelor’s or Master’s Degree in Computer Science, Information Systems, or other related field. Or equivalent work experience.

Experience:
Typically has 7 to 10 years of IT work experience in infrastructure/network environments performing network planning, architecture design, engineering (hardware and software) and optimization.

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.

Network Engineer

General Characteristics
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.
Dimensions Education:
Bachelor’s Degree in Computer Science, Information Systems, or other related field. Or equivalent work experience.

Experience:
Typically has 3 to 5 years of IT work experience in infrastructure/network environments performing network engineering (hardware and/or software), design, planning and implementation.

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.

Network Analyst

General Characteristics
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.

Dimensions Education:
Bachelor’s Degree in Computer Science, Information Systems, or other related field. Or equivalent work experience.

Experience:
Typically has 3 to 5 years of IT work experience in infrastructure/network environments in network design, implementation, administration and support.

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.

Network Administrator

General Characteristics
Monitors, troubleshoots and maintains network (LAN, WAN and wireless) multiplexers, hubs and routers, and uses remote monitoring tools. The duties of this position can be broad and may include such tasks as installing new workstations and other devices, adding and removing individuals from the list of authorized users, archiving files, overseeing password protection and other security measures, monitoring usage of shared resources, and handling malfunctioning equipment. Selects, develops, integrates and implements network management applications for Internet components.
**Dimensions Education:**
Bachelor’s Degree or technical institute degree/certificate in Computer Science, Information Systems, or other related field. Or equivalent work experience.

**Experience:**
Typically has 3 to 5 years of IT work experience in infrastructure/network environments in network operations, support, maintenance and administration.

**Complexity:**
Intermediate professional level role. Works on projects/systems/issues of medium to high complexity. Provides daily operations support, maintenance and administration for network systems. Works on one or more projects as a project team member, occasionally as a project leader. May coach more junior technical staff.

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**Network Technician**

**General Characteristics**
Provides daily operations support and maintenance for network systems (including wireless). Proactively monitors networks to provide stable, dependable network services across multiple platforms. Configures and troubleshoots computer networks. Maintains LAN/WAN/wireless operations by working with network facility and hardware/software vendors to ensure timely problem resolution. Maintains and utilizes network management applications to identify network faults, to ensure the provision of data or other telecommunications access to customers, and the movement of information from one location to the other.

**Dimensions Education:**
Associate’s or Bachelor’s Degree, or technical institute degree/certificate in Computer Science, Information Systems, or other related field. Or equivalent work experience.

**Experience:**
Typically has 1 to 3 years of IT work experience in infrastructure/network environments.

**Complexity:**
Learner/entry level role. Works on projects/systems/issues of small to medium complexity. Provides daily operations support and maintenance for network systems. Works on one project at a time as a project team member. Functions, somewhat independently, under general direction of senior technicians/engineers, supervisors or managers. Generally follows documented procedures and checklists.

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**Manager, Internet Operations**

**General Characteristics**
Responsible for the development, release, and maintenance of Internet, Intranet, and Extranet systems and services supporting a wide range of content. Works with key business leaders and other IT groups to prioritize projects, maximize the effectiveness of Internet technologies in supporting the business strategy, improving communications, and enabling greater access to information. Ensures the coordination of all Internet and Web development activities, ensuring integration with other technologies utilized in the enterprise and continuity across applications. Develops standards for
Internet and Web project initiation, design, development, and support. Key challenge of this position is in managing and prioritizing the numerous requests by the business, and influencing and coordinating the development of Internet based technologies occurring in areas outside of IT.

**Dimensions Education:**
Bachelor’s Degree in Computer Science, Information Systems, or other related field. Or equivalent work experience.

**Experience:**
Typically has 7 to 10 years of IT and business work experience including managing team(s) responsible for development, implementation and maintenance of systems across multiple platforms. Experience with online relational database management systems, multimedia, Web applications development and testing.

**Breadth:**
Middle level management in Web systems and services operations and management functions. Works under general direction of senior level management. Typically 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 a Chief Technology Officer, IT Chief Operating Officer, E-Business Executive or Departmental IT Executive.

**Internet/Web Architect**

**General Characteristics**
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—that 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).

**Dimensions Education:**
Bachelor’s or Master’s Degree in Computer Science, Information Systems, or other related field. Or equivalent work experience.

**Experience:**
Typically has 5 to 7 years of IT work experience with demonstrated knowledge in architecture design, software development, database management systems and systems integration in multi-platform environments.
**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.

**Internet/Web Engineer**

**General Characteristics**
Integrally involved in the development and support of all Internet/Intranet/Extranet sites and supporting systems. Works closely with other IT groups and customers to define the system design and user interface based on customer needs and objectives. Participates in all phases of the development and implementation process, and may act as a project manager on special projects. Ensures the integration of the Web servers and all other supporting systems. Responsible for system tuning, optimization of information/data processing, maintenance and support of the production environment.

**Dimensions Education:**
Bachelor’s Degree in Computer Science, Information Systems, or other related field. Or equivalent work experience.

**Experience:**
Typically has 4 to 6 years of IT work experience in systems analysis, development and engineering in an online environment.

**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.

**Web Applications Programmer**

**General Characteristics**
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.

**Dimensions Education:**
Bachelor’s Degree in Computer Science, Information Systems, or other related field. Or equivalent work experience.
Experience:
Typically has 3 to 5 years of IT work experience in software development, installation and modification in an online environment.

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.

Web Designer

General Characteristics
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.

Dimensions Education:
Bachelor’s Degree in Computer Science, Information Systems, Graphic Design, or other related field. Or equivalent work experience.

Experience:
Typically has 3 to 5 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.

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.
**Webmaster**

**General Characteristics**
Accountable for the design, upgrading, enhancement, maintenance, availability and effectiveness of technical functionality and content for one or more Web sites of the enterprise. Coordinates the publishing of Web site content, user interface, look/feel and level of specificity to suit a wide range of needs. Responsible for working closely with marketing and systems teams to coordinate content, developing on-going site structure and updates. Knowledge and experience in HTML, including style sheets, templates, complex tables, frames, image maps, CGI programming, applets, animation, multimedia design and delivery, and Web publishing procedures, is essential.

Primary focus is generally on gathering requirements that relate to the organization’s business objectives relative to site audiences, and continuous content updates and site upgrades to enhance site hits/visits. Webmaster, in a junior role, would focus more extensively on programming content rather than the technical aspects of this position. Impact and complexity of this job increases if organization is utilizing Internet solutions (vs. only Intranet), especially those having significant business impact (e.g., e-business).

**Dimensions Education:**
Bachelor’s Degree in Computer Science, Information Systems, or other related field. Or equivalent work experience.

**Experience:**
Typically has 4 to 6 years of IT work experience. Experience in systems administration, Web graphic design, development and implementation experience using HTML, Perl and CGI languages.

**Complexity:**
Intermediate professional level role. Works on projects/systems/issues of medium to high complexity. Provides design, implementation, maintenance and administration support for Web systems and services. Works on one or more projects as a project team member, occasionally as a project leader. May coach more junior technical staff.

**Internet/Web Systems Administrator**

**General Characteristics**
Responsible for ensuring the control, integrity, and accessibility of the Internet/Intranet for the enterprise. Responsible for change management procedures regarding the installation and testing of all upgrades and enhancements for the Internet/Intranet infrastructure. 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. 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.
Dimensions Education:
Bachelor’s Degree in Computer Science, Information Systems, or other related field. Or equivalent work experience.

Experience:
Typically has 3 to 5 years IT work experience with Web-related software and hardware products, and systems administration experience with multi-platform environments.

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

Web Customer Support Specialist

General Characteristics
Responsible for providing support services to users of Internet and Extranet sites. Provides technical advice and guidance relative to problems involving user interface, browser, hardware and supporting software.

Troubleshoots and restores routine technical service and equipment troubles by analyzing, identifying and diagnosing faults and symptoms using established processes and procedures. Maintains a knowledge database and call tracking database to enhance quality of problem resolutions. Coordinates efforts with the Help Desk to ensure all calls outside the customer environment are effectively resolved. Works in a team setting, sharing information and assisting others with calls. Provides input to Web development team for site improvements based on customer feedback. This job is very similar to an experienced Help Desk professional, with the added responsibility of interfacing directly with external customers to the business. As a result, customer service and technical competencies are very critical, as this may be the only “live” interface a customer has with the business.

Dimensions Education:
Bachelor’s Degree in Computer Science, Information Systems, or other related field. Or equivalent work experience.

Experience:
Typically has 3 to 5 years IT work experience in PC or client/server platform, network or systems administration in relevant computing environments.

Complexity:
Intermediate professional level role. Works on projects/systems/issues of medium to high complexity. Provides internal and external customer support for Web systems and services. Works on one or more projects as a project team member, occasionally as a project leader. May coach more junior technical staff.
Director, Data Center Operations

**General Characteristics**
Responsible for the overall enterprise-wide effectiveness and efficiency of data center technology systems and networks and in ensuring high levels of customer satisfaction are maintained. Leads the migration to new technologies, evaluates processing performance relating to machine utilization and reliability, and forecasts financial, physical, and human resource needs to meet established objectives. Oversees and coordinates network/data operations, business continuance and restoration plans that isolate problems and implement pre-planned alternative routes or systems to restore service.

**Dimensions Education:**
Bachelor’s or Master’s Degree in Computer Science, Information Systems, or other related field. Or equivalent work experience.

**Experience:**
Typically has 10 to 15 years of IT and business industry work experience, with at least 3 years of leadership experience in managing multiple, large, cross-functional teams or projects, and influencing senior level management and key stakeholders. Experience in the areas such as network, database administration, computer operations and production support.

**Breadth:**
Senior level management in data center operations and management functions. Has overall responsibility for department decisions and management. Provides strategic direction, coaches and mentors more junior management staff. Accountable for IT functional/departmental results. Frequently reports to a Chief Information Officer or IT Chief Operating Officer.

Manager, Computer Operations

**General Characteristics**
Responsible for the activities in the areas of production, data control, operations, and operations support. Develops and implements standards, procedures and processes for the operations group. Plans and manages the support of new technologies, data center performance and reliability. Defines and negotiates service level agreements. Oversees and coordinates the daily activities of the operations center. Provides input and recommendations regarding business continuance issues and improvements to the operations of systems and processes supported.

**Dimensions Education:**
Bachelor’s Degree in Computer Science, Information Systems, or other related field. Or equivalent work experience.

**Experience:**
Typically has 7 to 10 more years of IT work experience including managing team(s) responsible for production and operations support.

**Breadth:**
Middle level management in data center operations. Works under general direction of senior level management. Typically 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, Director, Data Center Operations or Operating Unit IT Executive.

**Supervisor, Computer Operations**

**General Characteristics**
Supervises the computer operations within the data center. Responsible for the day-to-day assignments of staff, and the follow-up of their work performance. Manages the daily activities to resolve problems and change management issues. Responsible for production systems’ online response time. Maintains system availability, prepares metrics to evaluate systems performance, and works with IT groups and users to ensure that service objectives are met.

**Dimensions Education:**
Associate’s or Bachelor’s Degree or technical institute degree/certificate in Computer Science, Information Systems, or other related field. Or equivalent work experience.

**Experience:**
Typically has 5 to 7 years of IT work experience in computer operations with exposure to multi-platform environments. Requires experience in leading teams and projects.

**Breadth:**
First level management in data center operations. Works under general direction of middle level management. Manages multiple processes within the operations area. Manages and mentors technical staff.

**Computer Operator**

**General Characteristics**
Responsible for monitoring multi-technology computing platforms including midrange platforms, mainframes and/or servers. Responsible for ensuring a stable operating environment and attaining maximum utilization of system facilities. Operates and monitors console systems and peripheral equipment such as printers, disk drives and tape readers. Troubleshoots and restores routine technical service and peripheral equipment, schedules production runs, performs system backup process, disaster recovery tests, loads tapes, disks and paper as needed. Assists programmers and systems analysts in running jobs that are used for testing and debugging new programs.

**Dimensions Education:**
Associate’s or Bachelor’s Degree or technical institute degree/certificate in Computer Science, Information Systems, or other related field. Or equivalent work experience.

**Experience:**
Typically has 0 to 1 year of IT work experience.

**Complexity:**
Learner/entry level role. Supports systems on a single platform. Works on one project as a team member and assists with special projects. Functions, somewhat independently, under direction of senior operators, supervisors or managers. Generally follows documented procedures and checklists.
Manager, Capacity Planning

General Characteristics
Develops, manages and forecasts capacity requirements based on business needs and IT infrastructure growth capacity. Facilitates the development of policies to ensure that existing capacity is being used as efficiently as possible. Ensures data recovery, maintenance, data integrity and space requirements are met across a variety of platforms. Ensures that capacity workload modeling and availability analysis is performed for a variety of platforms and large environments. Serves as an expert resource to IT groups in planning the resource requirements for systems under development. Presents statistical availability and trend analysis and recommendations to IT management, IT leadership, and the business, as needed. Ensures reliability and availability of platforms to meet business objectives.

Dimensions Education:
Bachelor’s Degree in Computer Science, Information Systems, or other related field. Or equivalent work experience.

Experience:
Typically has 7 to 10 years of IT work experience including managing team(s) responsible for infrastructure/operations support in multi-platform environments.

Breadth:
Middle level management in operations and management functions. Works under general direction of senior level management. Typically 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, Director, Data Center Operations or Operating Unit IT Executive.

Manager, Production Support

General Characteristics
Manages the daily operations of the Production Support group. Develops and implements policies and procedures for the production support function which includes operator training and development, data center scheduling, installation and re-start and recovery procedures. Monitors and reports all production outages.

Performs proactive analysis on all factors impacting high availability and service level attainment. Requires interaction with appropriate IT and business unit personnel. This position requires in-depth knowledge of computer operations, monitoring and control, systems recovery and production processing control.

Dimensions Education:
Bachelor’s Degree in Computer Science, Information Systems, or other related field. Or equivalent work experience.

Experience:
Typically has 7 to 10 years of IT work experience including managing team(s) responsible for production and operations support.
Breadth:
Middle level management in data center operations. Works under general direction of senior level management. Typically 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, Director, Data Center Operations or Operating Unit IT Executive.

Production Support Analyst

General Characteristics
Manages and controls the processing of programs and peripheral equipment on mainframe and/or distributed computer systems to ensure the highest levels of service and system availability are attained. Establishes production runs, ensuring that appropriate job control language, run documentation and data files are available. Assists in job set-up. Performs problem identification, escalation and resolution. Communicates status of operations to allow for immediate response to service disruptions.

Dimensions Education:
Bachelor’s Degree in Computer Science, Information Systems, or a related field. Or equivalent work experience.

Experience:
Typically has 3 to 5 years of IT work experience in production and operations support.

Complexity:
Intermediate professional level role. Provides production support on multiple platforms. Works on multiple projects as a team member and may lead projects of moderate complexity. May coach more junior technical staff.

Manager, Telecommunications Operations

General Characteristics
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.

Dimensions Education:
Bachelor’s Degree in Computer Science, Information Systems, or other related field. Or equivalent work experience.

Experience:
Typically has 7 to 10 years of IT work experience including managing team(s) responsible for infrastructure/network/telecommunications operations and support in multi-platform environments.
**Telecommunications Engineer**

**General Characteristics**
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.

**Dimensions Education:**
Bachelor’s Degree in Computer Science, Information Systems, or other related field. Or equivalent work experience.

**Experience:**
Typically has 3 to 5 years of IT work experience in telecommunications and multi-platform environments.

**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.

**Telecommunications Technician**

**General Characteristics**
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.

**Education:**
Associate’s or Bachelor’s Degree, or technical institute degree/certificate in Computer Science, Information Systems or other related field. Or equivalent work experience.

**Experience:**
Typically has 1 to 2 years of IT work experience with basic understanding of telecommunications and multi-platform environments.

**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.

**Director, Electronic Commerce**

**General Characteristics**
Responsible for creation, implementation and management of the enterprise’s systems in support of business e-commerce. Collaborates with business leadership in the development of an e-commerce strategy and in the prioritization of development work. Must understand business processes. Ensures integration of Internet/Extranet systems architecture with existing enterprise architecture. Develops and implements e-commerce service concepts including: pricing, packaging, product offerings and lifecycle management.

Develops site transaction and partnership strategy. Works with appropriate senior management to analyze customer feedback, develop promotional plans, and target marketing for product and service concepts.

Possesses overall project management responsibility for all e-commerce development work. Responsible for the integration of the Web site with Product Development, Customer Service and Sales organizations.

Manages content creation, input from other marketing groups and editorial calendar. Identifies and manages technology development partners and outside vendors. Maintains currency of new technology and evaluates opportunities for improvement. May manage a team of product managers and content editors.

**Education:**
Bachelor’s or Master’s Degree in Computer Science, Information Systems, or other related field. Or equivalent work experience.

**Experience:**
Typically has 10 to 15 years of IT (including Web/Internet, database applications and data warehousing) and business/industry work experience, with at least 3 years of leadership experience in managing
multiple, large, cross-functional teams or project, and influencing senior level management and key stakeholders.

Breadth:
Senior level management. Oversees strategic planning and development of e-commerce solutions in partnership with technical and business leadership. Provides technical and e-business leadership for the enterprise. Accountable for enterprise-wide results. Frequently reports to a Chief Information Officer, Chief Technology Officer or E-Business Executive.

Manager, Electronic Commerce

General Characteristics
Partners with business units to develop creative solutions using e-commerce technology that will enhance the enterprise’s competitive advantage. Directs the implementation of e-Commerce services and businesses for the enterprise or specific business units. Responsible for the daily management of e-Commerce activities and staff. Possesses professional experience and knowledge in a variety of net-centric computing architectures and technologies. Possesses an operational knowledge of key business processes and understands the technology either utilized or needed for their operation. Strong Project Management expertise is essential.

Education:
Bachelor’s Degree in Computer Science, Information Systems, or other related field. Or equivalent work experience.

Experience:
Typically has 7 to 10 years of IT work experience including managing team(s) responsible for Web/Internet, database applications and data warehousing functions.

Breadth:
Middle level management in the e-commerce function. Works under general direction of senior level management. Typically 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 E-Business Executive or Director, Electronic Commerce.

Electronic Commerce Analyst

General Characteristics
Responsible for the analysis, development, maintenance and support of e-commerce software programs to ensure the needs of the business community are appropriately addressed. Works closely with vendors and trading partners. Duties include the creation and trading of partner profiles, mapping of transactions, establishment of communication links with trading partners and the testing of secure transaction maps and communication links to ensure security, proper identification and capture of required data. Identifies and documents programming requirements for all new transactions. Assists in the development and documentation of policies and procedures for the e-Commerce function.

Education:
Bachelor’s Degree in Computer Science, Information Systems, or other related field. Or equivalent work experience.
Experience:
Typically has 3 to 5 years of IT work experience in software development, installation and maintenance, Web/Internet, database applications and/or data warehousing.

Complexity:
Intermediate professional level role. Provides programs development, maintenance and support on multiple platforms for the e-commerce function. Works on multiple projects as a team member and may lead projects of moderate complexity. May coach more junior technical staff.

EDI Specialist

General Characteristics
Provides technical expertise and support for Electronic Data Interchange (EDI), and other Business-to-Business communications. Analyzes and develops the EDI interface. Participates in systems design and quality assurance activities. Supports the user community and creates and maintains partner relationships with customers and vendors. Responsible for developing EDI mapping specifications and documentation. Duties include testing, implementing and maintaining EDI transactions, developing and maintaining trading partner definitions including relevant translation objects utilizing EDI translation software tools.

Handles communications with trading partners for EDI transaction set-up and ongoing maintenance. Coordinates between trading partners and networks to ensure mapping compliance. Tests and resolves incoming EDI file problems. Develops new business opportunities utilizing EDI. Resolves technical mapping variations or gaps and first-level troubleshooting issues in production environment. Develops guidelines, checklists, procedures and training documentation. Often involved with a variety of client/server platforms.

Education:
Bachelor’s Degree in Computer Science, Information Systems, or other related field. Or equivalent work experience.

Experience:
Typically has 3 to 5 years IT or related work experience in e-commerce, network, telecommunications engineering and support in multi-platform environments.

Complexity:
Intermediate professional level role. Provides EDI programs development, maintenance and support on multiple platforms for the e-commerce function. Works on multiple projects as a team member and may lead projects of moderate complexity. May coach more junior technical staff.

Director, Data Warehouse

General Characteristics
Responsible for the overall architecture, design, development, and maintenance of data warehousing and data mart systems and services for the entire enterprise’s business function. Works closely with customers from a strategic perspective to identify and maximize opportunities to utilize data marts and/or data warehouse systems to improve business processes, promote the strategic use of information technology, and enable the work force to use technologies as a competitive tool. Ensures
the development of enterprise-wide standards for the Data Warehouse to ensure compatibility and integration of multi-vendor platforms. Responsible for organizational balance and system coherency between front-end desktop/client environment and Data Warehouse back-end processing functions. Provides corporate leadership, vision, and direction for data warehouse systems, in support of the enterprise’s business objectives and requirements.

**Education:**
Bachelor’s or Master’s Degree in Computer Science, Information Systems, or other related field. Or equivalent work experience.

**Experience:**
Typically has 10 to 15 years of IT and business/industry work experience, with at least 3 years of leadership experience in managing multiple, large, cross-function teams and projects, and influencing senior level management and key stakeholders. Experience in strategic planning, development, implementation and maintenance of large-scale integrated relational database systems.

**Breadth:**
Senior level management. Oversees strategic planning and development of data warehouse solutions in partnership with technical and business leadership. Accountable for enterprise-wide results. Frequently reports to a Chief Information Officer or Chief Technology Officer.

### Manager, Data Warehouse

**General Characteristics**
Works with the business and senior IT leadership to identify and establish information requirements, develop and implement data warehouse strategies that utilize data marts and/or data warehouse systems to enhance business processes and manage business intelligence. Leads the activities of data warehouse project teams in the design, development and implementation of data warehouses; and the configuration and auditing of data warehouses to ensure quality control of data.

Responsible for overseeing the development, operations and maintenance of data warehouse environment, including organizational balance and system coherency between front-end desktop/client environment and data warehouse back-end processing functions. Provides guidance regarding the use of data warehouse system, capability of systems to deliver information, and subject matter expertise regarding current systems and emerging technology. Needed knowledge includes process and data modeling, data architectural development methodology, project management and extensive knowledge of data warehouses and data marts.

**Education:**
Bachelor’s Degree in Computer Science, Information Systems, or other related field. Or equivalent work experience.

**Experience:**
Typically has 7 to 10 years of IT work experience including managing team(s) responsible for systems/applications development, database management systems and data warehouse development and management.

**Breadth:**
Middle level management in the data warehouse function. Works under general direction of senior level management. Typically 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 a Director, Data Warehouse or Director, Systems and Programming.

**Business Intelligence Architect**

**General Characteristics**
Responsible for leading the design and support of enterprise-wide business intelligence applications and architecture. Works with enterprise-wide business and IT senior management to understand and prioritize data and information requirements. Solves complex technical problems. Optimizes the performance of enterprise business intelligence tools by defining data to filter and index that add value to the user. Creates testing methodology and criteria. Designs and coordinates a curriculum for coaching and training customers in the use of business intelligence tools to enhance business decision-making capability. Develops standards, policies and procedures for the form, structure and attributes of the business intelligence tools and systems. Develops data/information quality metrics. Researches new technology and develops business cases to support enterprise-wide business intelligence solutions.

**Dimensions Education:**
Bachelor’s or Master’s Degree in Computer Science, Information Systems, or other related field. Or equivalent work experience.

**Experience:**
Typically has 7 to 10 years of experience with large and complex database management systems, business intelligence tools and systems.

**Complexity:**
Expert/lead technical role. Provides technical expertise and direction for the development of complex enterprise-wide business intelligence and decision support systems solutions. Works on multiple projects as a project leader or sometimes as a business 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.

**Data Warehouse Analyst**

**General Characteristics**
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.

**Education:**
Bachelor’s Degree in Computer Science, Information Systems, or other related field. Or equivalent work experience.

**Experience:**
Typically has 3 to 5 years of IT work experience in business intelligence tools and systems.

**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.

**Data Warehouse Administrator**

**General Characteristics**
Provides data warehouse support functions including database maintenance, development and enhancement. Performs database administration functions such as loading data into database from external sources, supports users in constructing queries and generating output files. Responsible for ongoing design and performance enhancement, which include reviewing queries for performance issues, estimating, monitoring and tuning the warehouse as it operates. Develops and administers processes to ensure interoperability and security of data warehouse system. Must possess a strong understanding of source data, data modeling, and data repository requirements.

**Education:**
Bachelor’s Degree in Computer Science, Information Systems, or other related field. Or equivalent work experience.

**Experience:**
Typically has 3 to 5 years of IT work experience in business intelligence tools and systems.

**Complexity:**
Intermediate professional level role. Provides daily administration, maintenance and support of data warehouse applications 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.

**Manager, Decision Support**

**General Characteristics**
Acts as liaison between business and IT leadership regarding the identification of business critical information and knowledge (e.g., customer and market data), and its usage and availability. Manages the Decision Support staff to ensure that the Decision Support Systems (DSS) and Executive Information Systems (EIS) are built to meet the information needs of the business leaders and various business units. Has full understanding of corporate strategies and must manage the diversity of needs and prioritize those needs based on the overall business strategy of the organization.
Works closely with key business leaders to define critical information needs, providing guidance regarding availability of data, capability of systems to deliver information needs, and subject matter expertise regarding current systems and emerging technology. Leads the research, evaluation and selection of new technologies. Leads cost and feasibility studies. Ensures project management process is in place, provides resource management and ensures quality and timely solutions. Needed knowledge includes process and data modeling, data architectural development methodology, IT planning methodology, consulting and facilitation, project management and extensive knowledge of the enterprise’s data and decision-making processes.

**Education:**
Bachelor’s Degree in Computer Science, Information Systems, Business Administration, or other related field. Or equivalent work experience.

**Experience:**
Typically has 7 to 10 years of IT work experience including managing team(s) responsible for database, data warehouse, decision support systems and executive information systems development, support and administration.

**Breadth:**
Middle level management in the data warehouse function. Works under general direction of senior level management. Typically 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 a Director, Data Warehouse or Director, Systems and Programming.

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**Decision Support Specialist**

**General Characteristics**
Works closely with customers and design teams in prioritizing data and information requirements. Determines how Decision Support Systems (DSS) and Executive Information Systems (EIS) will provide the information required to make effective business decisions; translates requirements into applications that employ appropriate decision support and reporting tools. Involved in the design, development and maintenance of DSS. Performs modeling of data sources and flows, works with data management staff to define an operational framework that will define, develop and implement DSS, EIS, policies and security frameworks to ensure precise and secure delivery of knowledge and information. Monitors system performance, implements changes to optimize performance. Involved in the selection of new products. Needed skills and knowledge includes process and data modeling, DSS architecture and tools, development life cycle methodologies, IT planning methodology, extensive knowledge of the enterprise’s data and decision-making processes.

**Education:**
Bachelor’s Degree in Computer Science, Information Systems, or other related field. Or equivalent work experience.

**Experience:**
Typically has 3 to 5 years of IT work experience in business intelligence tools and systems.

**Complexity:**
Intermediate professional level role. Provides support for user community and development team in design, development and maintenance of DSS and/or EIS applications. Works on multiple function tasks that tend to be of medium technological complexity. Identifies and recommends technology solutions. Works one or more projects as a team member and may lead projects of moderate complexity. May coach more junior technical staff.

**Decision Support Administrator**

**General Characteristics**
Supports the user community in the use of business intelligence tools to query files and databases for report outputs. Assists customers in use of OLAP tools, extracts and collects data for performing queries and writing reports. Reviews queries for performance issues, making changes as needed. Participates in the design and development of the system, as well as creation of user documentation. Monitors customer usage, upgrades enterprise-wide OLAP query and reporting tools, monitors batch queries and ensures interoperability and security of various front-end components. Maintains meta data coordination, and supports production system. Needed knowledge includes process and data modeling and data architectural development methodologies.

**Education:**
Associate’s or Bachelor’s Degree or technical institute degree/certificate in Computer Science, Information Systems, or other related field. Or equivalent work experience.

**Experience:**
Typically has 1 to 3 years IT work experience in business intelligence tools and systems.

**Complexity:**
Learner/entry level role. Provides support for user community. Works on multiple function tasks that tend to be of low technological complexity. Works on one or more projects as a project team member. Functions, relatively independent, under direction of senior professionals, supervisors, or managers. Generally follows documented procedures and checklists.

**Manager, CRM Technology**

**General Characteristics**
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.

**Education:**
Bachelor’s Degree in Computer Science, Information Systems, Business Administration or other related field. Or equivalent work experience.

**Experience:**
Typically has 7 to 10 years of IT work experience including managing team(s) responsible for data warehousing, decision support systems or marketing support information systems.

**Breadth:**
Middle level management. Works under general direction of senior level management. Typically 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.

**Knowledge Engineer**

**General Characteristics**
Responsible for developing an infrastructure and process to capture knowledge gained by the organization through successful system interventions and enabling its shared use. Oversees the identification of critical knowledge, its usage, availability and the needs of various business groups. Involved in modeling information sources, flows and critical paths, as well as understanding how information is turned into knowledge and the relationship of knowledge and how it supports and enables key business processes. Facilitates the development of supporting knowledge architecture and standards. Works with operations staff to define an operational framework that defines, develops and implements delivery systems, systems management, policies and security frameworks to ensure delivery of knowledge and information to appropriate groups.

Possesses expertise in process and data modeling, architectural development methodologies, IT planning methodologies and extensive knowledge of the enterprise’s business and decision-making processes. Must possess strong leadership skills to gain credibility with various business leaders and stakeholders. Makes complex IT and business decisions. Works with other IT groups to ensure solid cross-functional decisions are made as a team.

**Education:**
Bachelor’s or Master’s Degree in Computer Science, Information Systems, Business Administration, or other related field. Or equivalent work experience.

**Experience:**
Typically has 7 to 10 years of IT and business/industry work experience. Experience with document management, groupware, relational database systems, data warehouse and data mining, Web and systems analysis/development.
Complexity:
Expert/lead technical role. Develops infrastructure and process for identifying and sharing enterprise’s core technical and business knowledge. Works on multiple projects as a project leader or as the subject matter expert. Works on projects/issues of high complexity that require demonstrated knowledge across multiple technical areas and business segments. Coaches and mentors more junior technical staff.

ERP Team Lead

General Characteristics
Accountable for providing overall direction and integration for a specific ERP module, functional and/or business area. Understands the business strategy of a particular function/area and works with the team to define business requirements. Communicates and coordinates with other Team Leads, business leadership, and Project Manager to ensure appropriate integration of processes and modules across the enterprise.

Oversees, defines and monitors critical path activities and resolves issues or escalates issues to the Project Manager as needed. Drives the design and implementation of new business processes with organizational structure and required ERP configuration.

Must possess an in-depth understanding of the business function/process supported, and also be viewed as a credible representative of that business function/process. Successful implementation is dependent on the ability of the incumbent to influence business leadership and management decisions and drive ownership and acceptance of changes to the business.

Education:
Bachelor’s Degree in Computer Science, Information Systems, Business Administration, or other related field. Or equivalent work experience.

Experience:
Typically has 7 to 10 years of IT and business work experience including managing team(s) responsible for systems implementation and/or infrastructure support. Often is recruited internally from high-level management positions in the organization.

Breadth:
Middle level management. Works under general direction of senior level management. Typically manages and mentors supervisors, project leads and/or technical staff. Degree of integration driven by ERP requires a consensus decision making process across Team Leads. Once key decisions are made, Team Lead then has autonomy for the technical decisions to support the business, but business process decisions are made through constant education and negotiation with business leadership and management. Works on complex business issues, which have a significant impact to the enterprise and across enterprise processes and functions due to the integration of ERP. Frequently reports to a Chief Technology Officer, Competency Center Leader or Departmental IT Executive.

ERP Team Member

General Characteristics
Responsible for documenting the “to-be” processes, defining performance metrics and identifying and resolving process gaps. Has a strong understanding and experience in the ERP methodology used by the
organization. Responsible for mapping the business processes to ERP modules (often in conjunction with consultants) and participates in user acceptance testing. Often is involved in the creation of documentation and training materials, and may deliver training during implementation. May also act in a system support role immediately after implementation. Incumbents in this position come from the business, with an expert level of understanding of all of the business processes of the function they represent. They also serve as a communications liaison to the business during the implementation.

**Education:**
Bachelor’s Degree in function represented in the business. Or equivalent work experience.

**Experience:**
Typically has 3 to 5 years of business and/or ERP implementation experience.

**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.

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**ERP Configurer**

**General Characteristics**
Performs functional analysis, requirements, definition and ERP module configuration and testing. Responsible for conducting prototypes, developing functional specifications, data mapping, function mapping, setting of configuration tables and setting of transaction/control tables. Has a thorough understanding of the business processes and flows to enable the analysis of business requirements and the development of solutions for the business functions. Responsible for the identification of and resolution of gaps in the business processes.

Involved in security/authorization set-up, user documentation, data interface design, data migration and reconciliation. May be involved in the installation and tuning of modification, as well as archiving data. Generally this position has light programming skills in the appropriate language to develop necessary “work arounds.”

**Education:**
Bachelor’s Degree in Computer Science, Information Systems, Business Administration, or other related field. Or equivalent work experience.

**Experience:**
Typically has 3 to 5 years of IT work experience in systems/applications development or support functions.

**Complexity:**
Intermediate professional level role. Provides support for the user community and development team in the design, development, configuration and testing of ERP modules. Works on multiple functional tasks that tend to be of medium technological complexity. Identifies and recommends functional and technological solutions. Works on one or more projects as a team member. Acts as a subject matter expert for one ERP functional area. May coach more junior technical staff.
ERP Programmer/Analyst

Scope Variant
Maps to level B

General Characteristics
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.

Education:
Bachelor’s Degree in Computer Science, Information Systems, or other related field. Or equivalent work experience.

Experience:
Typically has 3 to 5 years of IT work experience in programming and/or ERP systems analysis. Requires advanced programming techniques and software design. May require knowledge of ERP applications or object oriented analysis and design.

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.

ERP Systems Support Specialist

General Characteristics
Serves as single point-of-contact for end-users after Power Users have assisted end-users. Performs problem identification and on-the-spot training to prevent problem reoccurrence and knowledge transfer. Escalates Tier 2 problems to appropriate support (e.g., technical experts or process experts). Maintains history reports, identifies and addresses re-occurring problems, and assists in the development and execution of ERP and business process best practices across the organization. Performs basic fixes and data maintenance. May develop on-line help and update systems support help scripts. This position is very similar in responsibilities and tasks to a help desk position, but the impact to the organization due to errors is more significant. This position requires more advanced training than a similar help desk position.

Education:
Bachelor’s Degree in Computer Science, Information Systems, Business Administration, or other related field. Or equivalent work experience.

Experience:
Typically has 3 to 5 years of business and/or ERP experience.
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.

ERP Systems Administrator

General Characteristics
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.

Education:
Bachelor’s Degree in Computer Science, Information Systems, or other related field. Or equivalent work experience.

Experience:
Typically has 3 to 5 years of business and/or ERP implementation experience. Experience with systems and database administration.

Documentation Specialist/Technical Writer

General Characteristics
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.

**Education:**
Bachelor’s Degree in Journalism, Technical Writing, Business Administration, or other related field. Or equivalent work experience.

**Experience:**
Typically has 3 to 5 years of business or technical writing experience and working knowledge of multiple software and graphics packages.

**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.

**Director, IT Risk and Compliance**

**General Characteristics**
Leads, develops and maintains the IT risk and compliance management strategy. Develops and maintains policy, standards, processes and procedures to assess, monitor, report, escalate and remediate IT risk and compliance related issues. Works collaboratively with corporate compliance, internal auditing and corporate risk management and various technical teams in the design and implementation of audit, risk assessment and regulatory compliance practices for IT. Leads cross-functional teams in performing reviews and tests of IT internal controls to ensure that existing IT systems are operating as designed and that they contain adequate controls. Facilitates risk assessments and identifies risk themes. Proactively promotes enhancement of technology-related internal controls awareness and training across IT and business units.

Monitors and analyzes technology risk trends, recommends appropriate IT policies, procedures and practices to strengthen internal operations. Directs IT functional teams in the development, implementation, monitoring and reporting of control processes, documentation and compliance routines. Advises IT and business executives on the status of technology risk and compliance issues based on assessment results and information from various monitoring and control systems. Educates IT and business executives on appropriate mitigation strategies and approaches. Provides oversight regarding audit, regulatory and risk management activities across IT functional areas, such as the development and maintenance of regulatory documentation (e.g., Sarbanes-Oxley Act compliance). Coordinates the IT component of both internal and external audits, federal and state examinations. Possesses detailed knowledge of industry regulatory environment and risk management practices, and thorough understanding of local and federal regulations such as Sarbanes-Oxley, Basel II, and HIPAA.

**Dimensions Education:**
Bachelor’s Degree in Computer Science, Information Systems, Business Administration, or other related field. Or equivalent work experience.
Experience:
Typically has 10 to 15 years of IT and business work experience including managing team(s) responsible for risk management, compliance and audit, information security management.

Breadth:
Senior level management in risk and compliance management. Has overall responsibility for department decisions and management. Provides strategic direction, coaches and mentors more junior management staff and/or senior level professionals. Has accountability for IT functional/departmental results. Frequently reports to a corporate risk management executive, Chief Financial Officer or Chief Information Officer.

Manager, IT Audit

General Characteristics
Leads and manages internal audit function for information systems audits and compliance-related work (e.g., Sarbanes-Oxley Act compliance) using generally applicable and accepted standards and framework for IT audit (e.g., COBIT). Develops and implements an IT audit strategy and plan to review technical systems controls, identify control weakness and communicate significant control and compliance risk to senior management. Provides recommendations to correct or mitigate IT systems control and compliance weaknesses. Works with corporate and IT risk management team in developing and implementing internal control policies in a wide variety of IT processes. Promotes compliance with regulatory requirements and IT best practices, especially with respect to project management, systems development and information security. Provides control-related consultancy to management teams and ensures the existing/new applications and/or technology infrastructure elements comply with enterprise security, control and audit standards in addition to passing local and federal regulatory examinations.

Supervises and conducts audit activities. Prepares audit reports, advises IT leadership and business line management about the status of technology-related internal control and compliance issues, makes recommendations for risk mitigation, process, control or cost improvement approaches. Plans, manages, directs and reviews the work of technical auditors and consultants.

Dimensions Education:
Bachelor’s Degree in Computer Science, Information Systems, Business Administration, or other related field. Or equivalent work experience.

Experience:
Typically has 7 to 10 years of IT and/or auditing work experience including managing team(s) responsible for audit, finance or accounting functions. Typically possesses an IT auditing professional designation (e.g., Certified Information System Auditor (CISA)) or accounting professional designation (e.g., CPA).

Breadth:
Middle level management. Works under general direction of senior level management. Typically 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 Chief Financial Officer, Chief Information Officer or IT Chief Operating Officer.
IT Auditor

General Characteristics
Responsible for planning and performing audits of information systems and related processes in a multi-platform environment. This may include reviewing organizational IT policies, standards and procedures and providing advice on their adequacy, accuracy and compliance with government guidelines and regulatory requirements (e.g., Sarbanes-Oxley Act); assisting management in the identification and assessment of technology related risks, and reporting on the adequacy of risk-based controls; evaluating technology and business related controls for integrated IT and business auditing efforts. Participates in new system development and implementation reviews by reviewing project documentation, conducting interviews, assessing work completed.

Ensures that development efforts are in compliance with organizational policies, standards and procedures, and controls are adequately incorporated into the systems; identifies areas of opportunity for process, control or cost improvement. Works with outside auditors to help reconcile discrepancies or support the external auditing functions and local, federal examinations. May be responsible for developing and implementing tools to support automated audit effort. May perform due diligence and special review(s) work as required by management. Has working knowledge of generally applicable and accepted auditing standards and framework (e.g., COBIT) and best practices for IT services management (e.g., ITIL), government guidelines and laws (e.g., Sarbanes-Oxley Act).

Education:
Bachelor’s or Master’s Degree in Computer Science, Information Systems, Business Administration, or other related field. Typically requires an IT auditing professional designation (e.g., Certified Information System Auditor (CISA)) or accounting professional designation (e.g., CPA).

Experience:
Typically has 5 to 7 years of IT work experience, including 2 to 3 years IT auditing or equivalent experience.

Complexity:
Advanced professional level role. Works on multiple auditing 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.

Manager, Technical Training

General Characteristics
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.

**Education:**
Bachelor’s Degree in Instructional Technology, Computer Science, Information Systems, Education, or other related field. Or equivalent work experience.

**Experience:**
Typically has 7 to 10 years of Training (including curriculum development for IT and instructional technology) experience, 2 or more years of training management experience.

**Breadth:**
Middle level management. Works under general direction of senior level management. Typically 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.

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**Technical Trainer**

**General Characteristics**
Responsible for the creation, and delivery of training and development programs to all levels of end-users 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 online help. Delivers training to a variety of audiences, understanding and applying adult learning principles. More junior position works on and delivers training programs for standard packages and productivity tools (e.g., Word, Excel, e-mail). More senior position delivers technical training to IT professionals, and requires in-depth knowledge and experience in the systems/applications/programming languages supported (e.g., Oracle, NT, C++)

**Education:**
Bachelor’s Degree in Instructional Technology, Computer Science, Information Systems, Education, or other related field. Or equivalent work experience.

**Experience:**
Typically has 3 to 5 years of Training (including IT course development and delivery) experience.
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.

Security Manager

General Characteristics
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.

Education:
Bachelor’s Degree in Computer Science, Information Systems, or other related field. Or equivalent work experience.

Experience:
Typically has 7 to 10 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.

Breadth:
Middle level management. Works under general direction of senior level management. Typically 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.

Security Analyst

General Characteristics
Develops and manages security for more than one IT functional area (e.g., data, systems, network and/or Web) across the enterprise. Assists in the development and implementation of security policies and procedures (e.g., user log-on and authentication rules, security breach escalation procedures, security auditing procedures and use of firewalls and encryption routines). Prepares status reports on security matters to develop security risk analysis scenarios and response procedures. Responsible for the tracking and monitoring of software viruses. Enforces security policies and procedures by administering and monitoring security profiles, reviews security violation reports and investigates possible security exceptions, updates, and maintains and documents security controls.
Involved in the evaluation of products and/or procedures to enhance productivity and effectiveness. Provides direct support to the business and IT staff for security related issues. Educates IT and the business about security policies and consults on security issues regarding user built/managed systems. Represents the security needs of the organization by providing expertise and assistance in all IT projects with regard to security issues. Must have extensive knowledge in networking, databases, systems and/or Web operations. More junior level position primarily focuses on security administration; a more senior level position is involved in developing enterprise security strategies, management of security projects and the most complicated security issues.

**Education:**
Bachelor’s Degree in Computer Science, Information Systems, or other related field. Or equivalent work experience.

**Experience:**
Typically has 4 to 6 years of combined IT and security work experience with a broad range of exposure to systems analysis, applications development, database design and administration; one to two years of experience with information security. Requires knowledge of security issues, techniques and implications across all existing computer platforms.

**Complexity:**
Intermediate professional level role. Works independently or on multiple IT security projects as a project team member, occasionally as a project leader. Works on small to large, complex security issues or projects that require increased skill in multiple IT functional areas. May coach more junior staff.

**Data Security Specialist**

**General Characteristics**
Responsible for the planning, design, enforcement and audit of security policies and procedures which safeguard the integrity of and access to enterprise systems, files and data elements. Responsible for acting on security violations. Maintains knowledge of changing technologies, and provides recommendations for adaptation of new technologies or policies. Recognizes and identifies potential areas where existing data security policies and procedures require change, or where new ones need to be developed, especially regarding future business expansion. Provides management with risk assessments and security briefings to advise them of critical issues that may affect customer, or corporate security objectives. Evaluates and recommends security products, services and/or procedures to enhance productivity and effectiveness.

Oversees security awareness programs and provides education on security policies and practices.

**Education:**
Bachelor’s Degree in Computer Science, Information Systems, or other related field. Or equivalent work experience.

**Experience:**
Typically has 4 to 6 years of IT work experience with a broad range of exposure to systems analysis, applications development, database design and administration; one to two years of experience with information security. Requires knowledge of security issues, techniques and implications across all existing computer platforms.
**Complexity:**
Intermediate professional level role. Works on multiple projects as a team member and leads the data-related security components. Develops security solutions for medium to highly complex assignments. May coach more junior technical staff.

**Network Security Specialist**

**General Characteristics**
Involved in the full life cycle of network security management. Assists in the development and implementation of security policies, procedures and measures in a networking environment. Responsible for firewall configuration, maintenance, monitoring and other various network security measures. Performs security assessments and reviews networking initiatives for security compliance. Prepares status reports on security matters to develop security risk analysis scenarios and response procedures. Involved in the continual improvement of the network infrastructure and implementation of new security-based technologies. Evaluates and recommends security products for various platforms in the networking environment. Educates users about network security policies and consults on security issues. Must have broad technical knowledge of client/server, network topology and network/infrastructure security.

**Education:**
Bachelor’s Degree in Computer Science, Information Systems, or other related field. Or equivalent work experience.

**Experience:**
Typically has 3 to 5 years of combined IT and security work experience with a broad exposure to infrastructure/network and multi-platform environments. Requires knowledge of security issues, techniques and implications across all existing computer platforms.

**Complexity:**
Intermediate professional level role. Develops security solutions for medium to high complex assignments. Works on multiple projects as a team member and lead network-related security components. May coach more junior technical staff.

**Systems Security Specialist**

**General Characteristics**
Develops, evaluates and manages systems security across the enterprise. Areas of concentration include account management, password auditing, network based and Web application based vulnerability scanning, virus management and intrusion detection. Requires technical expertise in systems administration and security tools, combined with the knowledge of security practices and procedures. Assists in the development and implementation of security policies and procedures (e.g., user log-on and authentication rules, security breach escalation procedures, security auditing procedures and use of firewalls and encryption routines). Prepares status reports on security matters to develop security risk analysis scenarios and response procedures.

Enforces security policies and procedures by administering and monitoring security profiles, reviews security violation reports and investigates possible security exceptions, updates, and maintains and
documents security controls. Involved in the evaluation of products and/or procedures to enhance productivity and effectiveness.

Provides direct support to the business and IT staff for systems security related issues. Educates users on systems security standards and procedures. Must have broad technical knowledge of network operating systems (e.g., UNIX, NT).

**Education:**
Bachelor’s Degree in Computer Science, Information Systems, or other related field. Or equivalent work experience.

**Experience:**
Typically has 2 to 5 years of combined IT and security work experience with a broad exposure to infrastructure/network and multi-platform environments. Requires knowledge of security issues, techniques and implications across all existing computer platforms.

**Complexity:**
Intermediate professional level role. Develops security solutions for medium to high complex assignments. Works on multiple projects as a team member and lead systems-related security components. May coach more junior technical staff.

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**Web Security Specialist**

**General Characteristics**
Assists in the development and management of Web security policy and procedures for the enterprise. Evaluates information security solutions on Inter/Intranet/Extranet environments. Responsible for monitoring, assessing and reviewing rule base and configurations of firewalls and intrusion detection systems. Performs security assessment reviews of the e-commerce applications for compliance to security policies, standards and practices. Reviews software products and recommends security solutions for various platforms and initiatives. Educates users on the Web security standards and practices. Reviews and prepares status reports on security matters to develop security risk analysis scenarios and response procedures.

Ensures compliance to security policies and procedures by administering and monitoring security profiles; reviews security violation reports and investigates possible security exceptions; updates, maintains and documents security controls. Must have knowledge of client/server and Web technologies and a strong understanding of e-commerce operations.

**Education:**
Bachelor’s Degree in Computer Science, Information Systems, or other related field. Or equivalent work experience.

**Experience:**
Typically has 3 to 5 years of combined IT and security experience with a broad range of exposure to infrastructure/Web and multi-platform environments. Requires knowledge of security issues, techniques and implications across all existing computer platforms.
Complexity:
Intermediate professional level role. Develops security solutions for medium to high complex assignments. Works on multiple projects as a team member and leads Web-related security components. May coach more junior technical staff.

Manager, Product Development

General Characteristics
Manages research and development activities relating to the design and development of software or hardware products and qualification or re-qualification of new and existing products. Works with a cross-functional team to ensure fulfillment of product requirements, evaluates product performance and transition products from development to commercialization. Assists in determining product delivery and deployment dates for new product releases, feature and maintenance releases and regular corrective service or service pack releases.

Acts as a technical consultant to the product organization and leads research, and prototyping of innovative technologies and products. Ensures the technology and architectural roadmap of engineering is properly aligned with and supports the product/business road map. Acts as a customer liaison on technical issues related to product integration, custom development and requirements. May lead major releases and ensure feature enhancements respond to customer requests. Responsible for product delivery managing schedules and tasks related to all aspects of product development.

Education:
Bachelor’s Degree in Computer Science, Information Systems, Engineering, or other related field. Or equivalent work experience.

Experience:
Typically has 7 to 10 years of high-tech industry, product engineering and/or IT work experience. Experience with managing team(s) responsible for software, hardware design, engineering and development functions.

Breadth:
Middle level management. Works under general direction of senior level management. Typically 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 senior level software development executive, research and development executive or Chief Technology Officer.

Product Architect

General Characteristics
Chairs the product architecture team and provides technical leadership in the planning, design and architect phases of software or hardware product development. Identifies, evaluates, and recommends solutions using advanced architectures and technologies to facilitate rapid development and implementation. Understands key competitors’ products and differentiating features. Works with a cross-functional team to translate customer requirements into detailed architectural approaches and product specifications, creates realistic development plans and schedules, evaluates and prioritizes requests for product changes and enhancements.
Understands business needs as well as customer and market requirements. Applies creativity, in-depth technical and theoretical knowledge, and experience in solving highly complex architectural design problems. Recommends new technology directions or options to maintain products’ competitive advantages.

Communicates technology design and any related issues to technical and non-technical audiences including customers and technical partners. Prepares and documents product architecture plans. May design technical testing methods to meet target product scalability and performance objectives. Participates in the standards committees and other industry gatherings to track industry trends and maintains knowledge of new technologies to better serve the enterprise’s architecture needs.

**Education:**
Bachelor’s or Master’s Degree in Computer Science, Information Systems, Engineering or other related field. Or equivalent work experience.

**Experience:**
Typically has 7 to 10 years of high-tech industry, product engineering and/or IT work experience.

**Complexity:**
Expert/lead technical role. Provides technical expertise and direction for the development of complex hardware and software projects. 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.

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**Product Engineer**

**General Characteristics**
Responsible for all aspects of software or hardware product delivery and performance. Works with design engineering and test team to drive products from design completion to volume production release. Performs various engineering tests to verify and validate product designs, such as defining and specifying new product Design Verification Test (DVT) requirements and participation in the DVT process. Supports product evaluation and qualification on leading edge technology components. Ensures that production schedules are followed and product(s) meet specifications and quality requirements. Interacts with product engineering, quality, manufacturing and marketing teams to analyze and provide technical support to help resolve customers’ product related problems/issues.

**Dimensions Education:**
Bachelor’s Degree in Computer Science, Information Systems, Engineering or other related field. Or equivalent work experience.

**Experience:**
Typically has 4 to 6 years of high-tech industry, product engineering and/or IT work experience.

**Complexity:**
Intermediate professional level role. Performs product design and engineering work for medium to highly complex assignments. Works on multiple projects as a team member, sometimes as a technical leader. May coach more junior technical staff.
Product Developer

General Characteristics
Responsible for designing and developing software or hardware product. Understands business and customer requirements that drive the analysis and design of technical solutions. Participates in all phases of product development lifecycle, including the analysis, design, test and integration of products. Develops design specifications and parameters that are in compliance with products’ architectural blueprints. Researches, evaluates and incorporates new technology and tools to enhance the product development process. Resolves customer complaints with products and responds to suggestions for improvement and enhancements. May assist in development of product user manuals.

Education:
Bachelor’s Degree in Computer Science, Information Systems, Engineering or other related field. Or equivalent work experience.

Experience:
Typically has 4 to 6 years of high-tech industry, product engineering and/or IT work experience.

Complexity:
Intermediate professional level role. Performs product design and development work for medium to highly complex assignments. Works on multiple projects as a team member, sometimes as a technical leader. May coach more junior technical staff.

Manager, Systems Software

General Characteristics
Responsible for managing the programming, administration and support activities for the enterprise’s operating systems that may reside on multiple platforms. Has a high level understanding of operating systems and foundation architecture. Accountable for operating systems software selection and development and continued maintenance of such systems to improve efficiencies. Develops departmental standards and procedures including systems programming standards and program documentation requirements. Defines and monitors multiple projects, provides technical and administrative supervision. Must interface with members of the IT and user community to coordinate activities relating to the implementation of new software. Provides technical consultation and support to users and other IT staff.

Education:
Bachelor’s Degree in Computer Science, Information Systems, or other related field. Or equivalent work experience.

Experience:
Typically has 7 to 10 years of IT work experience including managing team(s) responsible for systems engineering, development, administration and support.

Breadth:
Middle level management. Works under general direction of senior level management. Typically 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 Chief Information...
Officer, IT Chief Operating Officer, Chief Technology Officer, Operating Unit IT Executive or Departmental IT Executive.

**Systems Architect**

**General Characteristics**
Responsible for providing senior level expertise on decisions and priorities regarding the enterprise’s overall systems architecture. Facilitates the establishment and implementation of standards and guidelines that guide the design of technology solutions including architecting and implementing solutions requiring integration of multiple platforms, operating systems and applications across the enterprise. Reviews, advises and designs standard software and hardware builds, system options, risks, costs vs. benefits and impact on the enterprise business process and goals.

Develops and documents the framework for integration and implementation for changes to technical standards. Assists in the development of and manages an architecture governance process. Provides technical guidance to project team areas as appropriate. Tracks industry trends and maintains knowledge of new technologies to better serve the enterprise’s architecture needs.

**Education:**
Bachelor’s or Master’s Degree in Computer Science, Information Systems, or other related field. Or equivalent work experience.

**Experience:**
Typically has 7 to 10 years of IT work experience in infrastructure/systems environments performing systems planning, architecture design, engineering (hardware and software) and optimization.

**Complexity:**
Expert/lead technical role. Defines systems architecture 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.

**Systems Software Programmer**

**General Characteristics**
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.

**Education:**
Bachelor’s Degree in Computer Science, Information Systems, or other related field. Or equivalent work experience.
Experience:
Typically has 4 to 6 years of IT work experience in systems administration and programming.

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.

Groupware Specialist

General Characteristics
Responsibilities include defining the business requirements for the organization’s next generation of collaborative work tools, which involves working with end-users to develop specifications for the development and implementation of groupware applications (e.g., Lotus Notes, Microsoft Exchange). Based on the business requirements, responsible for the implementation, maintenance and support of groupware systems. Evaluates and recommends associated hardware/software solutions based on business requirements and user needs.

Responsibilities include providing technical leadership in the design, development and promotion of selected groupware strategies. Actively involved in engineering and deploying various groupware applications such as team collaborative computing, Internet and wireless access, document sharing and next generation messaging clients.

Education:
Bachelor’s Degree in Computer Science, Information Systems, or other related field. Or equivalent work experience.

Experience:
Typically has 2 to 4 years of IT work experience in programming and systems analysis. Experience with groupware/messaging technologies, tools and relevant platforms.

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.

Systems Administrator

General Characteristics
Deploys the release of new technologies as well as designs, installs, configures, maintains and performs system integration testing of PC/server operating systems, related utilities and hardware. Responsible for trouble shooting server problems as reported by users. Researches, evaluates and recommends software and hardware products. Supports Web access and electronic messaging services and maintains a secure systems environment. Provides new hardware specifications to users based on application needs and anticipated growth, installs new servers and maintains the server infrastructure.
Education:
Bachelor’s Degree in Computer Science, Information Systems, or other related field. Or equivalent work experience.

Experience:
Typically has 3 to 5 years of IT work experience. Requires a high level of expertise in multiple system environments.

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.

UNIX Systems Administrator

General Characteristics
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.

Education:
Bachelor’s Degree in Computer Science, Information Systems, or other related field. Or equivalent work experience.

Experience:
Typically has 3 to 5 years of IT work experience. Requires a high level of expertise in multiple system environments with emphasis in UNIX-based systems.

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.

Storage Management Specialist

General Characteristics
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.

**Education:**
Bachelor’s Degree in Computer Science, Information Systems, or other related field. Or equivalent work experience.

**Experience:**
Typically has 3 to 5 years of IT work experience. Requires a high level of expertise in multiple system environments. Experience with networking, storage and systems administration.

**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.

**Director, Enterprise Architecture**

**General Characteristics**
Leads the creation and/or evolution of the enterprise architecture function/program including coordination of an appropriately balanced pursuit of enterprise business, information, technical and solution architectures. Leads the identification and analysis of enterprise business drivers to develop enterprise architecture requirements.

Analyzes technology industry and market trends and determines potential impact upon the enterprise. Leads the development of enterprise architecture governance structure based on business and IT strategies.

Oversees enterprise architecture implementation and ongoing refinement activities. Directs the development and execution of a communication (including education) plan for enterprise architecture standards. Acts as a sounding board or consultant to IT and business leaders in the development of IT solutions for business needs.

**Education:**
Bachelor’s or Master’s Degree in Computer Science, Information Systems, or other related field. Or equivalent work experience.

**Experience:**
Typically has 10 to 15 years of IT and business/industry work experience including architecture design and deployment, systems lifecycle management and infrastructure planning and operations, with 3 years of leadership experience in managing multiple, large, cross-functional teams or projects, and influencing senior level management and key stakeholders.
**Breadth:**
Senior level management. Participates in the technical aspects of strategic decisions regarding IT for the enterprise. Implements and manages those initiatives with complete autonomy. Makes decisions for the organization based on the highest degree of technical complexity and through understanding the far-reaching implications across the IT organization. Frequently reports to a Chief Information Officer or Chief Technology Officer of an enterprise.

**Manager, IT Business Planning**

**General Characteristics**
Assists the IT organization in defining and implementing its business plan and goals to support the strategy and goals of the organization. Responsible for working with IT and business leaders to create the business plan for IT. Assists in the cascading of plans to the various IT divisions/departments. Scans the external IT environment to provide a common set of planning assumptions, competitive analysis, current and future market assessments for products and services to the business, and a common set of planning processes and tools to assist those with planning responsibility in IT. Assists IT and business leadership in actualizing the business plans within their own area of responsibility, working with them to ensure that technical and resource decisions link to the overall IT plan. Works closely with the enterprise’s business planning leaders to ensure alignment.

Responsible for ensuring that business planning and purpose is considered in all key IT decisions, and therefore must be involved in the discussion and decision making process for technology, business, and human resource investments on an on-going basis. Works with Finance and Human Resources to represent the needs of IT and understand the cost and human resources impact of those needs in creating, implementing and adjusting business plans.

This position typically reports to the CIO. Ensures alignment of the IT strategy to the business strategy. Responsible for ensuring integration of all work performed across all business units. Responsible for educating senior business leaders on the IT strategy as well as educating senior IT leadership on the direction of the business. High degree of business complexity and impact to overall success of IT in meeting business needs.

**Education:**
Bachelor’s Degree in Computer Science, Information Systems, Business Administration, Finance, or other related field. Or equivalent work experience.

**Experience:**
Typically has 7 to 10 years of IT and business work experience with a broad range of exposure to various technical environments and business segments. Experience with managing team(s) responsible in strategic planning, infrastructure and operational support functions.

**Breadth:**
Middle level management. Works under general direction of senior level management. Typically 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 Chief Information Officer, IT Chief Operating Officer, Chief Technology Officer or Operating Unit IT Executive.
Enterprise Architect

General Characteristics
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.

Education:
Bachelor’s or Master’s Degree in Computer Science, Information Systems, or other related field. Or equivalent work experience.

Experience:
Typically has 7 to 10 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.

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.

Business Process Consultant

General Characteristics
Facilitates the optimization of business unit performance by enhancing the alignment between business processes and information technology. Responsible for actively resolving day-to-day technology needs of the business unit with a focus on the analysis of processes—dissecting problems and suggesting solutions.

Includes complex systems process analysis, design and simulation. Must understand technical problems and solutions in relation to the current, as well as the future business environment. Must be able to suggest plans to integrate new and existing processes. Provides input and supports planning and prioritization for business process engineering related activities, including developing the business unit process engineering plan and integrating that plan with the corporate plan. Possesses knowledge and experience leveraging both IT solutions and business process improvements.

Participates in continuous review and update to ensure that processes meet changing business unit conditions. Identifies processes for improvement, documents existing processes, identifies and analyzes gaps between current processes and the desired state, designs new processes, develops process performance measures and plans the transition to a new process. Provides counsel and leadership on future use of technology and business process improvements. This requires a high level of understanding of the organization’s business systems and processes as well as industry-wide requirements. Must demonstrate expertise in strategic planning, tactical execution, project management, process management and business systems requirements definition.
Education:
Bachelor’s or Master’s Degree in Computer Science, Information Systems, Business Administration, or other related field. Or equivalent work experience.

Experience:
Typically has 7 to 10 years of IT experience, 4 years of experience in process engineering and 2 years experience in project management.

Complexity:
Expert/lead technical role. Works on large, complex projects that have enterprise-wide impact and require subject matter expertise of multiple process improvement areas and mastery of process improvement tools. Works as a project team member on multiple projects to facilitate process improvements involving multiple sites or business areas, often as a project leader. Coaches and mentors more junior staff.

IT Business Consultant

General Characteristics
Works with business leaders and acts as a liaison between IT and business units (typically leadership for assigned business units) or vendors. Viewed as integral to the business in any decisions that may be impacted by technology. Acts as a business relationship manager responsible for the collection, analysis, review, documentation and communication of business needs and requirements to the IT organization. Leads the gathering of business needs as well as the design of solutions through direct interaction with business unit leaders. Focuses on developing and improving business processes at all times, assisting with the development of metrics, both within the technology and business organizations.

Has a strong understanding of information systems, business processes, the key drivers and measures of success for the business, and the short- and long-term direction of the business and technology. Identifies, proposes and influences business solutions, negotiates deliverables and requirements across multiple business customers or organizations. Ensures that the design and integration of proposed system, software and hardware solutions leads to the development and growth of the business through effective use of technology. Integrally involved in ‘buy vs. build’ decisions.

Education:
Bachelor’s or Master’s Degree in Computer Science, Information Systems, Business Administration, or other related field. Or equivalent work experience.

Experience:
Typically has 7 to 10 years of relevant technical and business work experience.

Complexity:
Expert/lead technical role. Works with business senior management in one business segment and corporate staff executives to align technology solutions with business strategies. Demonstrates breadth and in-depth knowledge of a business area to identify and communicate how IT solutions can add value. Supports one or more key business functions. Issues and interactions tend to be highly complex and have significant strategic importance. Serves as a project team member for strategic planning or as a team lead.
Business Analyst

**General Characteristics**
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.

**Education:**
Bachelor’s Degree in Computer Science, Information Systems, Business Administration, or other related field. Or equivalent work experience.

**Experience:**
Typically has 3 to 5 years of relevant technical or business work experience.

**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.

Configuration Management Analyst

**General Characteristics**
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.
**Education:**
Bachelor’s Degree in Computer Science, Information Systems, or other related field. Or equivalent work experience.

**Experience:**
Typically has 3 to 5 years of IT work experience in systems/applications development functions.

**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.

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### Release/Build Engineer

**General Characteristics**
Develops and maintains the build environment, the source code control system and the issue tracking systems. Creates and tests builds, resolves issues, applies labels to file and communicates build status. Responsible for building scripts and installation procedures. Proactively identifies and implements procedures to streamline the build process which may drive the development and maintenance of an automated build process with automatic notification of build and unit test failure problems to responsible engineers. May assist engineering management in making choices for source code management systems, and other development and testing tools. Knowledge of quality methods and procedures as well as PC, PVCS, UNIX and scripting languages is required for successful performance in this role.

**Education:**
Bachelor’s Degree in Computer Science, Information Systems, or other related field. Or equivalent work experience.

**Experience:**
Typically has 3 to 5 years of IT work experience with at least 2 years related to release management. Proficient in the use of project management, spreadsheet and database query tools. Has subject matter expertise in release management process.

**Complexity:**
Intermediate professional level role. Works on multiple releases/projects as a subject matter expert and as a project leader. Works on complex projects that require expertise across multiple disciplines and environments. May coach more junior technical staff.

### Director, Program Management

**General Characteristics**
Responsible for building and managing the project/program management office/function for IT. Defines and develops enterprise-wide IT project/program management practices, governance standards, processes and metrics. Ensures projects/programs are defined, tracked and communicated in a consistent and effective manner. Incorporates effective change and risk management controls. Partners with IT and business leadership and other key stakeholders to define opportunities, to identify and
prioritize projects based on predefined criteria (return on investment, productivity, compliance). Directs project/program managers with business case development. Responsible for ensuring all projects within IT portfolios/programs are delivered on time, within budget and to an agreed quality level. Must possess extensive knowledge and expertise in project/program management, portfolio management methodologies and tools. This is a single incumbent position that typically exists in a large enterprise with multiple program managers and/or project managers as direct reports.

Education:
Bachelor’s or Master’s Degree in Computer Science, Business Administration, or other related field. Or equivalent work experience. Project Management certification is required.

Experience:
Typically has 10 to 15 years of IT and business/industry work experience, with at least 3 years of leadership experience and 5 years managing projects and/or project portfolios.

Breadth:
Senior level management with overall responsibility for the enterprise-wide project/program management practices. Accountable for on-time, within budget and quality delivery of all IT projects/programs. Directs and mentors a team of program managers, project managers, portfolio managers and/or other project management staff. Frequently reports to a Chief Information Officer, Chief Technology Officer or IT Chief Operating Officer.

Program Manager

General Characteristics
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 typically exists in a small to medium size enterprise with multiple project managers, project leaders and/or project support staff as direct reports.

Education:
Bachelor’s or Master’s Degree in Computer Science, Business Administration, or other related field. Or equivalent work experience. Project Management certification is required.

Experience:
Typically has 10 to 15 years of IT and business/industry work experience, with at least 3 years of leadership experience and 5 years in managing projects.
**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.

**Project Manager**

**General Characteristics**
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.

**Education:**
Bachelor’s Degree in Computer Science, Information Systems, Business Administration, or other related field. Or equivalent work experience. Project Management certification or successful completion of a recognized project management curriculum is required.

**Experience:**
Typically has 7 to 10 years of IT work experience, including 4 or more years managing projects. Experience with projects in multiple technologies and functions.

**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. Typically manages and mentors project leaders and project management staff.
Project Leader

General Characteristics
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 Project Manager(s) and/or Program Manager(s) in identifying and prioritizing opportunities for utilizing IT to achieve the goals of the enterprise. Must possess advanced knowledge and proficiency in the use of project management methodologies and tools, resource management practices and change management techniques. This is an individual contributor role without human resource management responsibilities (e.g., hiring, performance management). Manages one or more projects of medium to high complexity. More senior role has responsibility for large, complex, cross-functional or multiple projects with greater impact to the enterprise.

Education:
Bachelor’s Degree in Computer Science, Information Systems, Business Administration, or other related field. Or equivalent work experience.

Experience:
Typically has 3 to 5 years of IT work experience, including 2 or more years managing projects.

Complexity:
Intermediate professional level role. Responsible for the management of one or more small to medium-sized, moderately complex projects. Leads, assigns and tracks results for a project team under general direction of project/program managers.

Project Management Specialist

General Characteristics
Designs, implements, evaluates and audits project management processes and templates for the project management office (PMO). Compiles metrics relating to IT project success, project attributes, and individual productivity and adherence to defined processes. May track costs and performance, service levels and other metrics required to ensure project goals and objectives are met. Serves as a resource to project managers and project leaders to educate and assist them with implementing project management processes and making improvement/changes. Provides administrative support to project managers and project leaders. Ensures project control systems are in place and integrates project data for decision makers. Administers and maintains project management software and tools (e.g., Microsoft Project Server). Organizes and publishes project-related documentation in various sources. Knowledge of project management tools, methods and best practices such as those defined by the Project Management Body of Knowledge (PMBOK).
Education:
Bachelor’s Degree in Computer Science, Information Systems, Business Administration, or other related field. Or equivalent work experience.

Experience:
Typically has 3 to 5 years of project support/management experience.

Complexity:
Intermediate professional level role. Works independently or on a team. Performs tasks of moderate to high complexity that require increased knowledge of multiple technical environments and knowledge of business areas that IT supports. May coach more junior staff.

Resource Manager

General Characteristics
Manages the coordination of human resource needs for IT projects. Develops the systems and processes to ensure that business, project and employee needs are met in the assignment of staff to projects. Responsible for developing and managing an employee skills assessment process, forecasting skill and staff needs based on project plans. Develops and manages a staff utilization process, ensuring that staff resources are fairly and evenly distributed and that staff are not over utilized across projects. Works with IT leadership, IT Staffing Manager and Training Manager in the forecasting of staff needs and skills, to ensure proper recruitment, training and development of staff to meet current and future IT needs. Coordinates the training and development of staff. Continually communicates with both project managers and assigned staff to ensure needs of both are being met, and to continue to improve staff selection and coordination of resources. Acts as the mentor and champion of training and career development processes for assigned staff. Ensures that performance appraisals occur upon completion of projects and that skills are updated. Coordinates and assimilates the performance appraisal information across projects resulting in a cohesive annual appraisal of staff who support a number of projects.

Education:
Bachelor’s Degree in Computer Science, Information Systems, Business Administration, Education, or other related field. Or equivalent work experience.

Experience:
Typically has 7 to 10 years of IT work experience including managing team(s) responsible for staffing, training and development and resource management.

Breadth:
Middle level management. Works under general direction of senior level management. Typically manages and mentors supervisors, project leads and/or technical staff. Works on multiple, complex issues/projects as a technical leader and the subject matter expert. Frequently reports to a corporate human resource executive, Chief Information Officer, IT Chief Operating Officer, Chief Technology Officer or Director, Program Management.
Manager, Technical Product Support

General Characteristics
Develops business strategy and provides direction for technical product support function. Manages a team responsible for resolving customer technical problems with enterprise’s products, developing the technical related responses for Requests for Quotes (RFQs), working with sales team to address technical product issues, and delivering and installing new software releases to customers and providing post-sales technical product support to customers.
Responsible for managing the technical interface to customers, including RFQ specification reviews, hands-on testing and modeling and interfacing with development and engineering for systems design work at customer sites. Responsible for building and maintaining relationships that can be leveraged to support the achievement of business objectives.

Education:
Bachelor’s Degree in Computer Science, Information Systems, Business Administration, or other related field. Or equivalent work experience.

Experience:
Typically has 7 to 10 years of high-tech industry and/or IT work experience in product engineering, development and support functions. Experience with managing teams and projects in multiple technological and business environments.

Breadth:
Middle level management. Works under general direction of senior level management. Typically manages and mentors supervisors, project leads and/or technical staff. Works on multiple, complex issues/projects as a technical leader and the subject matter expert. Frequently reports to a corporate senior level software development executive, research and development executive, sales executive or Chief Technology Officer.

Technical Product Support Analyst

General Characteristics
Responsible for providing post-sales technical product support. This includes, but is not limited to, analyzing customers’ business needs and developing technical requirements, preparing technical responses to Requests for Quotes (RFQs), configuring integrated solutions to meet customer needs and implementing client solutions. May act as a primary point of contact between customer’s technical staff and the enterprise’s development/ engineering organization. Serves as technical consultant to the sales team and must have a broad knowledge of multiple computer environments, platforms and technologies and in-depth knowledge of the enterprise’s products.

Education:
Bachelor’s Degree in Computer Science, Information Systems, or other related field. Or equivalent work experience.

Experience:
Typically has 4 to 6 years of high-tech industry and/or IT work experience in product engineering, development and/or support functions.

**Complexity:**
Intermediate professional level role. Works independently or on multiple projects as a project team member, occasionally as a project leader. Works on small to large, complex issues/projects that require increased skill in multiple technical environments and knowledge of one or more specific technical products. May coach more junior staff.

**Technical Product Support Specialist**

**General Characteristics**
Responsible for providing post-sales technical product support. This includes, but is not limited to coordinating the resolution of customer problems, maintaining and installing applications/solutions, performing bug verification, release testing and beta support for one or more products. May work at the customer site to design and install applications. Must have knowledge of one or more of the enterprise’s products and familiarity of multiple applications.

**Education:**
Associate’s or Bachelor’s Degree or technical institute degree/certificate in Computer Science, Information Systems, or other related field. Or equivalent work experience.

**Experience:**
Typically has 1 to 2 years related high-tech industry and/or IT work experience.

**Complexity:**
Learner/entry level role. Provides technical product support to one or more product(s) of low to medium complexity. Functions, somewhat independently, under general direction of more senior technical product support staff, supervisors or managers. Generally follows documented procedures and checklists.