
Long-Form Job Descriptions Samples

October 2011

Sample Job Descriptions*

- Data Architect
- Database Administrator
- Sr. Java Developer
- Voice Engineer
- SAP Functional Analyst (SME)

* Base salary and bonus data are available from Foote Partners for 153 job titles in each of 65 U.S. and 18 Canadian cities. All data is updated and published every 3 months.

Data Architect

The Data Architect is a person responsible for ensuring that the data assets of an organization are supported by an architecture supporting the organization in achieving its strategic goals. The architecture should cover databases, data integration and the means to get to the data. Usually the data architect achieves his/her goals via setting enterprise data standards.

Responsible for evaluating the use of data and relating data directly to the goals and practices of the company. Establishes consensus and a road map for moving forward to optimize the utility of data from multiple disparate sources. Participates on a team that is defining the overall data policy, standards, and best practices for the enterprise. Working with the Data Quality Manager, the incumbent must ensure the accuracy and accessibility of all important data and he or she is responsible for knowing what data is important and why. Directly responsible for the creation and maintenance of the enterprise data model. Responsible for the documentation of relevant data through the sound use of data modeling techniques and practices as well creating and managing meta-data.

The Data Architect will also assist and oversee the development of data models across the organization to ensure adherence to sound data management principles and where possible, the reuse of data. Helps define and manage master data for the enterprise. Oversees the development of complex data models and logical database design and develops policies, standards and procedures related to the database environment.

Responsibilities

- Develop and drive acceptance of an enterprise view of data and its use across the enterprise. Direct and ensure a common vocabulary and understanding of business entities and relationships between entities,
- Provide thought leadership for definition/maintenance of complex enterprise data models, data dictionaries, and master data management techniques.
- Develop and document data requirements and design specifications in the form of data models, data mappings and data quality metrics. Map out structure and organization of the relevant data for the company or project within the company.
- Participate in identifying and defining business drivers, goals, and information needs.
- Develop, improve, and support enterprise data standards and data architecture policies and procedures. Monitor and enforce compliance of data standards to minimize data redundancies and enhance information quality throughout the organization. Implement and document the company data architecture and data strategy.
- Govern conformance of the use of data in new technology solutions to the enterprise data model and usage policies and standards.
- Deliver conceptual and logical solution designs for specific applications or suites of applications within a conceptual (CSA) and logical (LSA) solution architecture for a set of business requirements that defines how the needs of an entire project/program impact the applications.
- Lead the analysis, design, development & implementation of logical data models; physical database objects; data conversion, integration, and loading processes; query and reporting functions; data management and governance; and data quality assurance processes

- Assists in developing enterprise-level strategies and principles for the integration of enterprise information resources by helping to define standards for data format, quality, and database design. Build and maintain the enterprise information model and ensure linkages to other architecture models and reference architectures
- Assist in maintaining and enhancing the metadata infrastructure (metadata repository, model repository); the data dictionary and business metadata, and facilitate publishing the information to the business and technical communities. Create business rules for the use of data
- Provide support and consulting to project leaders for new projects on data standards, data naming conventions, data sourcing, data feeds and logical database design, to ensure that new applications and data stores integrate with overall enterprise and data architectures. Review and sign off on all project data models.
- Communicate and educate others on the use of sound data management principles. Interact daily with Business Analysts and project teams.
- Work with the data integration groups and process analysts to: obtain and document data flow diagrams (DFD) and data mappings. Advises and guides data modelers in solution delivery teams for modeling standards and best practices. Maintain an inventory of all the "data stores" in the organization
- Understand and employ best practices for relational and multidimensional database design and understands appropriate application for each. Develop and implements plans to oversee the database administration function, and ensures smooth transition to new technology
- Provide source to target ETL requirements and work with ETL Developers to ensure efficient transformation and loading.
- Design, develop, test and implement automated extract, transformation and load routines using tools such as: SQL, PL/SQL, and SSIS. Direct the research and evaluation of new tools and techniques and management and maintenance of related tools and environments.
- Assist in the definition and implementation of system backup, recovery, and support plans. Perform required system maintenance.
- Coordinate and ensure data security administration, backup and recovery planning, capacity planning, performance and tuning
- Undertake complex projects requiring additional specialized technical knowledge. Make well-thought-out decisions on complex or ambiguous IT architecture issues. Coordinates with users to determine requirements.
- Monitors project schedules
- Ensures that system improvements are successfully implemented and monitored to increase efficiency.
- Acts as a resource for direction, training and guidance for less experienced staff. Conduct internal training on data architecture concepts.
- Lead definition of relevant business data
- Lead projects that are intended to support business decision support requirements. Manage realistic expectations of the customer by prioritization
- Coordinate specific database performance monitoring and tuning tasks including the design of optimization and indexing schemes
- Maintain an advanced understanding of industry application development methodologies, tools and techniques
- Help coordinate with central IT staff to plan, manage, maintain, mature and tune hardware and software environments

Skills and Knowledge

- Applies specialized knowledge of one or more areas of business process, information technology solutions (e.g. OMNI/Peoplesoft/Siebel) and an understanding of data modeling principles and methods to drive technology optimization and architecture recommendations.
- Solid understanding of data modeling techniques to drive technology optimization, data consolidation and technology strategy recommendations.
- Knowledge of enterprise architecture functioning for driving data and information related governance and strategy in the organization and
- Highly skilled in developing data architectures and standards.
- Knowledge of data management, data quality, data management with in-depth expertise of data optimization strategy.
- Demonstrated strong skills: data analysis and profiling; data integration knowledge; database engineering (e.g., DB2 and SQL Server) and design.
- Strong understanding of OLTP and decision support concepts and their implications to data modeling and database design
- Proven analytical skills to properly evaluate and interpret cross-functional data standardization requirements
- Ability to resolve complex issues relate to enterprise wide data architecture concerns
- Ability to architect data management enterprise solutions that are in alignment with strategic technology roadmap and emerging industry trends
- Experience in computer systems validation and software quality assurance highly desirable
- Understands, supports, and follows department standards and methodologies
- Understands and implements security requirements within a heterogeneous database and business environment
- Familiarity with process improvement frameworks such as the SEI CMMI
- Master data hub architecture, data design and implementation
- Metadata management, design and integration
- Data warehouse architecture, data mining, data design and implementation,
- ERP data architecture
- Knowledge of functions and processes of the relevant industry organization.
- Management style that exhibits high energy, strategic thinking, collaboration, direct communication and results orientation
- Effective in matrix management and team building
- Poise, maturity and communication skills necessary to represent the data architecture group internally and externally. Strong presentation, verbal and written communications skills

Experience

- Bachelors or higher-level business degree with mathematics, statistics, Information Management or data analytics focus.
- 8-10 years of previous experience in data base management, including an in-depth knowledge of mainframe, client server, network and workstation technologies, and their interdependence
- 5+ years experience in an IT or quantitative business area with solid demonstrated experience in data architecture, integrating and analyzing disparate data sources, and data quality improvement, preferably in the insurance or financial services industry.
- Experience playing a leadership role in enterprise-wide Data Quality Management, Data Resource Management, Data Stewardship and/or Data Administration programs at a company or similar size.
- Excellent analytical and problem solving skills.
- Strong understanding of SDLC and architectural methodologies and frameworks and their practical application. Has an advanced understanding and vision of the complete lifecycle of database, data warehouse and data mart development
- Hands-on experience with evaluating and implementing data quality metrics on both relational and legacy (flat file) systems. Knowledge of accounting and audit principles, Sarbanes-Oxley and/or the Model Audit Rule a plus.
- Proficient with a data modeling tool(s) (e.g., Computer Associates ERWIN, MS VISIO, IBM Rational Data Architect, IBM M1 tool).
- Experience with many of the following:
 - COBOL
 - COGNOS
 - Data Quality Tools (IBM Quality Stage, Information Analyzer)
 - ETL tools (Informatica PowerCenter, IBM DataStage, etc.)
 - File management and reporting utilities
 - IDMS
 - IGrafX
 - Informatica
 - Metadata Tools (SAG's Rochade and BeCubic, IBM's Metadata Server, Metadata Workbench, Business Glossary)
 - MS Powerpoint, MS Access, MS Excel
 - Oracle
 - RDBMS (Oracle, SQL Server, Teradata)
 - Siebel, OMNI, Peoplesoft, Adabase IBM WCC
 - SQL
 - SQL Developer
 - Sybase
 - Unix
 - XML
- Highly desirable certifications for this position may include the following:
 - Check Point Certified Master Architect (CCMA)
 - Citrix Certified Integration Architect
 - EMC Proven Professional Technology Architect – Expert
 - EMC Proven Professional Technology Architect - Specialist
 - IBM Certified Infrastructure Systems Architect
 - IT Certified Architect(ITCA/Open Group)
 - Master IT Certified Architect(ITCA/Open Group)
 - Microsoft Certified Architect (MCA)
 - Nortel Certified Architect

- Oracle Certified Master, Java EE Enterprise Architect (formerly Sun SCEA)
 - Oracle SOA Architect Certified Expert
 - Project Management Professional (PMP)
 - Red Hat Certified Architect (RHCA)
 - SNIA Certified Storage Architect
 - Sun Certified Enterprise Architect for Java Platform
 - TIBCO Certified SOA Architect
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- Direct experience in enterprise data warehouse architecture and development is usually desirable.
 - Possess a strong sense of customer service and consistently and effectively addresses customer needs
 - Ability to facilitate in requirements gathering sessions.
 - Has experience with and understands how best to apply agile or iterative development techniques
 - Capable of being an individual contributor and working as part of a team.
 - Proactive personality with a proven track record of delivering on responsibilities and tasks. Highly adaptive with an ability to organize, coordinate, and execute on details.
 - Has the ability to manage large projects and mentor junior team members
 - Strong communication skills (verbal and written) with an ability to work in a highly collaborative environment and build successful relationships across the organization. Must be able to articulate the impact of data quality and architecture changes in business terms.
 - People/facilitation skills - excellent at expectations management, obtaining buy-in/consensus, negotiating solutions, resolving conflict
 - Performs work with minimal supervisory direction
 - Demonstrated communication and presentation skills for strategic and optimization recommendations
 - Analyze and solve poorly defined or ambiguous problems
 - Strong interpersonal and communications skills for interacting with team members and business subject matter experts

Working Relationships

Internal:

- Reports to director- or manager-level architecture positions or equivalent. May supervise senior developers, systems administrators, technical specialists, and business technologists, and manage the performance of consultants and service providers
- Has close working relationship with the architecture team and peers in other areas of IT

External:

- Has regular contact with outside vendors and contractors/consultants for additional support as needed
- Develops relationships with professional organizations, user groups, and industry trade groups to stay current with technology
- Interfaces with vendors on technology and support issues

Database Administrator

Has primary responsibility for the definition, creation, and maintenance of the enterprise data model within the new computing environments (e.g., Unix, NT, Linux, Web/I-net). Analyzes, tests, and implements physical database design supporting various business applications (including base definition, structure, documentation, long-range requirements, operational guidelines). Ensures data recovery, maintenance, data integrity, and space requirements for physical database are met through formulations and monitoring of policies, procedures, and standards relating to database management. Provides a high degree of coordination between user, technical, application, and corporate entities to ensure effective data management as a corporate enterprise. Above all, ensures solutions meet business objectives and establishes and maintains a high level of user trust and confidence in IT's knowledge of and concern for users' business needs. Has a willingness to work with customers of varying levels of technical expertise in a high-pressure, complex environment.

Responsibilities

- *Provide first-level applications support:* Resolve problems and answer questions related to the RDBMS and platform environment (e.g., Unix, NT, Linux, MVS); contact vendor support when necessary; facilitate application development and client problem resolution with optimum speed and efficiency
- *RDBMS performance monitoring and tuning:* Closely monitor performance; identify problems and implement solutions; ensure the database is running at optimum speed and efficiency
- *Maintain database backup/recovery environment:* Respond quickly to refresh data; verify implementation of correct backup strategy; develop recovery procedures; support recovery from loss of data caused by user or system error
- *Install and upgrade RDBMS and related products:* Keep RDBMS at current release and maintenance levels; install supporting products; provide current, stable production and development environments
- *Reorganize database structures as needed:* Automate procedures at regular intervals; use tools to reorganize or defragment database table spaces, tables, and indexes; provide efficient database environment to maximize productivity and improve performance
- *Perform application refreshes on request:* Refresh data from one environment to another at the request of the application development staff; execute necessary tasks to accomplish this, including export, drop, create, and import prescheduled time to minimize impact; provide application development staff optimal development environment with current data
- *Provide assistance in database design as needed:* Research and recommend optimal design criteria; publish standards and work with development staff; standardize environment and improve efficiency
- *Capacity planning and reporting:* Monitor file system space, database allocation, etc.; verify efficient use of disk storage; reclaim dead space; optimize space allocation and avoid out-of-space conditions
- Create, develop, and review the physical model created from the logical model, ensuring the detailed physical design of data structures and databases complies with standards, guidelines, and procedures recommended for all aspects of data modeling, database design, and maintenance; ensure proper data modeling and design paradigms are applied

- Provide the appropriate tools, procedures, and facilities for creating and maintaining the entity data enterprise model
- Produce:
 - Entity relationship diagrams
 - Data flow diagrams
 - Database normalization schemata
 - Logical to physical database mapping
 - Data table parameters
- Manage the implementation and use of the enterprise data dictionary
- Work closely with Systems Programmers and Systems Administrators to create database schemata and subschemata; lead/review database designs; estimate sizes of new databases
- Develop rules, procedures, and standards for the access and maintenance of shared data resources
- Review overall physical database structures for data integrity, performance quality, recoverability, maintenance, and space requirement considerations
- Communicate complex technical information in a concise and articulate manner
- Participate in the evaluation and recommendation of DBA tools and new DBMS technologies
- Serve as business liaison to database vendors
- Be responsible for the integrity of production test and QA database environments
- Perform impact analyses, research products, configure software, and establish standards and procedures that support the company's database environment needs
- Be responsible for application-oriented database administration and technical support for the various development, training, testing, and production of relational database environments; focus on application-specific database issues to ensure optimal application performance and integrity
- Develop utilities for monitoring and evaluating data quality
- Assist in the definition and development of database documentation and standards
- Conduct application transaction volume and traffic analysis, and interpret impact on database and network performance
- *Development projects:* Interact with analysts and developers, understand system requirements from conceptual models, analyze transactions and data volumes, and design the physical database
- Have a willingness to move quickly into production support role

Skills and Knowledge

- Thorough understanding of the relational database model and solid theoretical knowledge of relational database techniques; skilled in ability to see the big picture and conceptualize and document creative solutions
- Experience in designing, modeling, developing, and supporting large RDBMS (or MDDDBMS) systems
- Extensive experience in logical and physical database design, hands-on data modeling techniques, and development methodology; physical schema design of table spaces, rollback segments, and data files
- Experience in the design of data extract, data migration, and data queuing facilities
- Proficiency in the concepts and practice of database normalization techniques

- Strong working knowledge of state-of-the-art database concepts/design/deployment, recovery techniques, performance monitoring and tuning, structured query language, relational database design techniques, JCL
- Ability to monitor and tune the database
- Knowledge of server-side development issues surrounding triggers, stored procedures, and packages
- Strong customer focus and management of client expectations; ability to establish and maintain a high level of user trust and confidence in IT's knowledge of and concern for users' business needs
- Excellent oral and written communications skills
- Ability to present and explain technical information to diverse types of audiences (management, users, vendors, technical staff) in a way that establishes rapport, persuades others, and gains understanding
- Ability to write clear proposals and technical documents
- Strong interpersonal skills at all levels of management and ability to motivate employees/teams to apply skills and techniques to solve dynamic problems; excellent teamwork skills
- Solid project management skills, effectively managing multiple small to large projects in a cross-functional environment
- Ability to weigh various suggested technical solutions against the original business needs and choose the most cost-effective solution
- Ability to work with long-established senior staff, provide guidance, and assign and follow up on tasks
- Proficiency in several RDBMS-specific middleware tools and utilities to support such activities as monitoring, database migration, DDL (data description language) management, and replication is a must.
- Experience with cross-platform networking in a TCP/IP environment
- Full knowledge of SQL, including programming and ways to optimize SQL code. Microsoft SQL Server, Visual SQL are a must.
- Solid programming knowledge of more than one 3GL/4GL/OO4GL language (e.g., C/C++/C#, Perl, Unix shell, Visual Basic)
- Any of the following are pluses: RAD/JAD, warehousing, Sybase Adaptive Server, CASE, Tuxedo, DCE, system management tools, Microsoft Exchange.
- Knowledge of Web-enabled Gils is a plus (e.g., Oracle Developer 2000)
- For Unix environment, experience with Unix shell scripting languages (e.g., Transact-SQL).

Experience

- Bachelor's degree in Computer Science, Engineering, or related discipline; Master's degree is desirable; equivalent experience acceptable
- 3 years in-depth experience in the design, administration, programming, and support of RDBMSs/MDDBMS (e.g., Oracle, DB2) in one or more computing environments (e.g., Unix, MVS, NT, Linux, Web).
- Ability to handle basic systems administration tasks to fulfill backup role if needed
- Demonstrated experience working well with customers of varying levels of technical expertise in high-pressure situations and complex environments
- Highly desirable that individual has earned two or more of the following:
 - Successful experience as a member of a multidisciplinary, high-performance work team or project group

- Demonstrated competency in project management and management of resources to meet goals and multiple projects
- Successful experience in working with end users to develop effective solutions to diverse and complex business problems
- Demonstrated initiative, good judgment, and the ability to achieve results through others
- Successful development and implementation of new technology and work processes
- Highly desirable certifications for this position may include the following:
 - Oracle Certified Expert MySQL 5.1 Cluster Database Administrator (formerly Sun SCMCDBA)
 - Oracle Certified Professional MySQL 5.0 Database Administrator (formerly Sun SCMDBA)
 - IBM Certified Database Administrator
 - IBM DB2 Universal Database Certified Solutions Expert (DB2)
 - Microsoft Certified Database Administrator (MCDBA)
 - Microsoft Certified IT Professional (MCITP/all)
 - Oracle DBA Certified Associate (OCA)
 - Oracle DBA Certified Master (OCM)
 - Oracle DBA Certified Professional (OCP)
 - Advanced Teradata Certified Professional
 - Teradata Certified Database Administrator
 - Teradata Certified Solutions Developer
 - Teradata 12 Certified Master
 - Teradata Certified Enterprise Architect
 - Teradata Certified Professional
 - Teradata Certified Technical Specialist
 - Teradata Certified SQL Specialist

Working Relationships

Internal:

- Has close working relationship with systems team and peers in other areas of IT
- Works closely with Senior Systems Programmer, RDBMS and systems administrators
- Has contact with application users, primarily in problem resolution
- Has frequent interaction with application development staff as facilitator and client problem resolver; works collaboratively on such activities as performance problems, hardware/software upgrades, application program design reviews, new application setup and implementation, application workload growth prediction and measurement, etc.
- Is key participant in high-level technical strategy meetings, major upgrade decisions, capacity planning data collections, performance reporting, new application designing, etc.

Sr. Java Developer

Responsible for Java/J2EE/J2SE application development supporting business objectives while providing expertise in software development lifecycle phases from concept and design to testing. Analyzes, designs and builds component-based applications in a Web/internet delivery environment, including introduction of an application layer, modeling techniques, component and object-oriented design, complex algorithmic coding, and systematic approaches to application integration. Works on new and existing applications along with enhancements web sites, web applications, and infrastructure. Performs hands-on coding, mentors junior developers and assists in architecting web content solutions. Serves as liaison to internal customers, research groups and various business support areas. Expertise in server-side web presentation technologies.

Responsibilities

- Develop Java enterprise solutions. Design, specify, and build component-based applications in a Web/Internet delivery environment, including:
 - Application analysis
 - Modeling techniques
 - Component and object-oriented design
 - Complex algorithmic coding
 - A systematic approach to application integration.
- Design, develop and support applications written in Java using current and new development technology, including J2EE, JSP, Servlets, JavaScript, HTML, XML, and Oracle, typically in a Windows/Vista or UNIX environment. Develop new application platforms.
- Scope, implement, test and deploy new features and versions of core applications, databases and utilities.
- Debug and maintain deployments of core applications, databases and utilities.
- Create enhancements to primary and supporting web sites, web applications and infrastructure
- Create component/subsystem documentation (UML, class, sequence, etc.). Produce design and technical specifications as needed for technical documentation.
- Translate customer requirements, recommend system solutions, and formulate detailed specifications from which programs are written. Work closely with business partners to produce quality products that meet business needs
- Provide and support technology infrastructure and assist with architecting web content solutions
- Liaison with end users, research groups and other business support areas
- Participate in design and technical meetings. Provide technical consultation to internal business and design teams
- Instruct, guide, and mentor junior-level programmers.

Skills & Knowledge

General

- Collaborative skills to work with database administrators, system managers and business partners and ensure reliability, availability, and performance of applications.
- Working knowledge/involvement in all phases of the software development life cycle, from requirements definition through testing and deployment. Installation of software patches and upgrades.
- Solid understanding of object-oriented design concepts and software development processes and methods including Java programming patterns.
- Skilled in structured application analysis, design and database practices.
- Solid analytical skills to troubleshoot and maintain applications as needed, and learn business processes.
- Ability to document development including database design, application design and ongoing documentation of changes and modifications.
- Proficient with enterprise software/hardware solutions and tools.
- Able to assess customer requirements and develop project deliverables to support solutions.
- Able to balance multiple concurrent projects of varying priorities and to shift focus from one project to another with minimal loss of productivity or quality.
- Experienced interacting with vendors
- Demonstrated ability to work to a plan and be part of team
- Ability to learn and adapt to continuously changing technology.
- Able to function as a team player and lead team members in small projects.
- Desirable: skills in Case Diagrams, Class Diagrams, Sequence Diagrams, Collaboration Diagrams, State Diagrams
- Excellent verbal and written communication skills especially in technical specifications
- Demonstrated track record of successful system and project implementations. Proven team player
- Ability to provide technical and professional guidance to other software engineers.

Technical

- Demonstrated experience using Java/J2EE standards and related technologies such as: JSP; JDBC; Beans; EJB; Servlets; JMS(Java Messaging Service); JTA; JNDI; Junit (Unit testing); JAAS (Java Authentication and Authorization Service); JCA (J2EE Connector Architecture); Log4j; OJB, Struts.
- Solid understanding of web architecture and technology (e.g. J2SE/J2EE, HTTP, HTML, SSL, web and application servers, XML, XSLT, XSD, WSAD, WSDL).
- Web Services experience desirable: IBM Websphere Application Server; SOAP; WebLogic Server 8.1 or other J2EE implementations; .NET, Apache Web server
- Technical understanding of data and relational databases and technical database design.
 - Oracle 8i/9i/10g/11i Application Server and Development tools (Jdeveloper).
 - Microsoft SQL Server 7+; SQL and PL/SQL stored procedures.
 - IBM DB2
- Familiarity with common open-source Java projects such as Jakarta projects is a plus.
- Desirable: understanding of Unified Modeling Language (UML) tools and how they are applied to Object Oriented design; MQ Series application programming skills.

- UNIX, HP UX, Linux and Windows NT operating systems.
- Visual Basic, C#, C, C++, COBOL, VB Script skills helpful.

Experience

- A Bachelor's degree in Computer Science, Mathematics or related discipline is required, or equivalent work experience and technical training.
- 5 or more years of Java experience managing application design, software development, maintenance and delivery with at least 3 years with application servers (e.g. Oracle 8i/9i/10g/11i Application Server; SQL Server; J2EE Application Server; IBM Websphere, Tomcat, or BEA Weblogic; Apache).
- Minimum of 3 years technical work experience in a team development environment
- Strong experience with Web architecture and Web design and development tools and languages, e.g. JSP, JDBC, Java Servlets, Javabeans/EJBs, ASP, VB Script, SQL, Perl, UNIX, C++, CORBA, JavaScript, SOAP, XML/XSLT/FOP, HTML, Struts, ANT, CVS, CMP, WebLogic.
- Strong relational database experience (DB2, Sybase, SQL, Oracle 8i/9i/10g/11i). Strong background working in distributed Unix environments.
- Experience designing N-tiered applications, with multi-tier architecture and production Internet architectures.
- Strong experience developing and implementing highly complex technical solutions in a J2EE web environment.
- Superior organizational and time management skills.
- Excellent written and verbal communication skills
- Highly desirable:
 - Java Development Certified Professional
 - JavaScript Development Certified Professional
 - Rapid applications development or extreme programming experience
 - Oracle Certified Associate, Java SE
 - Oracle Certified Master, Java SE Developer
 - Oracle Certified Programmer, Java EE Web Services Developer
 - Oracle Certified Professional Java Programmer

Working Relationships

Internal:

- Reports to the Manager, Business Applications Development or equivalent; may have a dual reporting relationship with business unit management and or a project or program manager of a development project.
- May have direct reports (mid- or junior-level Java programmers)
- Has regular contact with peer workers in business units and IT personnel

External:

- Has contact with vendors, industry peers, and professional associations to keep informed of existing and evolving industry standards and technologies

Voice Engineer

Responsible for the operation and maintenance of Voice over Internet Protocol (VoIP) services and related telecommunications systems including analysis, coordination, and implementation. A key participant on the team responsible for expert analysis / troubleshooting, system & network monitoring of all VoIP solutions, day to day maintenance and support as required. Defines requirements, architecture solution, vendor and platform evaluations, design certifications, and engineering. A key support person for various hardware, software, and equipment issues and problems, as well as service or maintenance for the various telecommunications equipment and systems. Works in a converged voice and data environment delivering IP telephony/VoIP solutions, typically with Cisco technology (e.g. Cisco Voice over IP, IP Contact Center, and Unity Voice Mail solutions), and plays a role in the continual improvement of the call processing network through technology and process changes.

Responsibilities

- Responsible for the design, installation, maintenance and overall performance of the voice network, including establishing routing groups, analog and digital line configurations and installations, voice mail, reporting; voice gateways, IP call processing equipment, ACD equipment..
- Provides technology support by installing servers, routers, and systems hardware. Trouble-shoots, maintains, upgrades, and provides solutions to voice quality issues and call routing problems and to complex hardware/software problems.
- Analyzes the existing voice and data networks and recommends solutions.
- Receives and processes telephone service requests; supports voice system moves, adds and changes; resolves issues with telecommunications vendors. new voice system installation assistance.
- Insures that systems perform in a manner which meets business needs and objectives.
- Executes complex tasks as well as accepts and resolves escalated complex support issues.
- Serves as voice technical resource and subject matter expert. Serves as a technical resource for the resolution of moderate to complex Voice, Voice mail, system servers, and network problems.
- Collaborates with users, vendors, and other technical staff members on the identification, isolation and correction of problems as well as enhancements in the voice networks and systems.
- Works with departmental managers, directors, and vendors to develop innovative call center technology solutions. Also works with call center vendors to evaluate integration and technology capabilities. Assists departmental managers in developing RFP's for outsourced call center services.
- May mentor less experienced Voice Engineers. Provide formal or informal knowledge sharing regarding the use of new and existing technologies and firm processes.
- Assesses customer's voice needs and conduct infrastructure planning and network assessments.
- Defines and develops cost effective voice solutions/enhancements that optimize the balance between business needs and communications equipment/software capabilities to include: researching, performing cost benefit analysis, recommending and gaining commitments.
- Participates in the development and implementation of best practices, policies, processes and procedures for the communications team as well as the enterprise.
- Assists in the management of projects through company's project management methodology.

- Consistently follows standard change management processes and ensures less experienced engineers also do. Document and evaluate impact of required changes to the various networked systems. Plan, schedule and communicate changes to be implemented.
- Interfaces with departments regarding telecommunications issues

Skills and Knowledge

- Has solid knowledge and expertise in four disciplines:
 - Traditional telephony: traditional telephone expertise in call routing; PBX / ACD concepts and practices; Interactive Voice Response (IVR) unit concepts and practices; and call routing concepts and practices.
 - System engineering: installing and configuring servers; performance monitoring vendor servers; basic and advance troubleshooting server operating systems; basic and advanced troubleshooting of server hardware platforms.
 - Network engineering: installing and configuring Cisco routers, switches and voice gateways; performance monitoring of Cisco network devices; basic and advanced troubleshooting of Cisco Input
 - VoIP technologies: highly desirable are Cisco and Avaya products
- Complete knowledge of industry standards; positions at this level exhibit full knowledge of industry practices, solve complex problems of a wide scope and complexity following established polices and procedures, includes functioning as technical lead and support for telecommunications systems.
- Ability to analyze, define, and quickly identify technical problems with systems
- Solid knowledge of basic telephone service telecommunication fundamental system operation and support, and type of transmission techniques; operation of private branch exchange features, traffic programs, and traffic reports
- Knowledge of Microsoft server principals and support; data communication architectures, design, and support
- Ability to lead technical teams to achieve their goals
- Demonstrated expertise with project management tools and techniques including metrics.
- Ability to define ACD reporting options, management reports, and databases
- Ability to mentor less experienced engineers
- Knowledge of the technology impacts on business strategic direction enabling definition and integration of technical plans supporting the enterprise business functions. Responsible for support and maintenance of the VoIP telephone systems, system servers, and data network that relates to VoIP.
- Business problem solving skills using business experience and technical expertise
- Ability to communicate clearly and concisely on both technical and non-technical matters (written, verbal)
- Demonstrated high level of initiative and ability in effective working relationships

- Technical expertise in many of the following:
 - Multi-layer network solutions in the Enterprises, IP Telephony, Call Manager, Unity, IPCC,
 - Meeting Place Security: PIX Firewalls, ACL, IPSEC, VPN Solutions, ASA 5500 series
 - Layer 2,3 and 4 Expertise: Cisco IOS/Cat OS Core Switching, STP, VLAN Architectures, Port security
 - Routing: BGP, IBGP, OSPF, IGRP, EBG, EIGRP, IS-IS, LRG, Multi-cast, GNIC, CIDR
 - WAN: ATM, POS, T-1, CSU/DSU, Frame Relay, DSL, Broadband, wireless, SNMP
 - OS: IOS, CatOS, Windows, Unix, Linux
 - Tools: MS Office, Visio, Etherpeek, Etherreel, Netstumbler, SnifferPro, Cisco, Nortel
 - PBX
 - Voice/Data Switching;
 - VoIP

Experience

- Equivalent to an Bachelors degree in Computer Science, Business, Engineering or related field.
- 5+ years related experience in telephone systems/software, system servers, data network engineering (hardware and software), network security practices, and designing/planning/implementing LANs and WANs.
- One or more years experience in VoIP network engineering.
- Advanced experience in analyzing operations, coordination and carrying out special projects from planning through implementation and support, with Microsoft servers and Cisco networking and operations experience highly desirable if not mandatory.
- Hands on expertise in wireless protocols, architecture and technology.
- Demonstrated expertise in one or more of the following:
 - Successful development and implementation of new technologies and work processes
 - High competency in project management and the execution of multiple or large projects, with experience in cross-functional environments
 - Strategic thinking
 - Relationship management
 - Multidisciplinary, high-performance work teams/groups
 - Developing efficient and effective solutions to diverse and complex business problems
- Demonstrated expertise in several of the following:
 - Cisco Call Manager
 - Cisco ICM or other ACD systems
 - Cisco IP Contact Center or other call center systems
 - Cisco Inter-Connecting Network Devices (ICND)
 - Interservice IVR
 - Unified messaging, voice mail
 - Avaya: Call Vectoring; Call Management System (CMS); BCMS Vu, Centre Vu Supervisor; Expert Agent Selection (EAS-PHD); World Class Routing; Definity System Administration
 - PBX
- Desired certifications

- Cisco Certified Internetwork Expert (CCIE/Voice, CCIE/Switching)
- Cisco Certified Internetwork Professional (CCIP)
- Cisco Certified Voice Professional (CCVP)
- Cisco IP Telephony Design Specialist
- Cisco IP Telephony Operations Specialist
- Cisco Certified Network Associate(CCNA)
- Cisco Certified Network Professional (CCNP)
- Microsoft Certified Systems Engineer (MCSE)

Working Relationships

Internal:

- Reports to Manager, Voice Engineering or a senior-level Voice Engineer
- Internal collaboration: Voice and data operations and deployment, WAN engineering, corporate services and functional staff, help desk, network security, telecom sourcing, network control centers
- Requires communications with departmental and business unit managers, as well as project manager and leaders, to define support initiatives and solutions
- Builds relationships with clients (positive customer relationships and friendly, helpful attitude will help to manage customer expectations)
- Interacts with individuals at all levels of the organization
- Has effective working relationships with peers in other areas of IT organization, which are essential for maintaining good public relations, facilitating communications, and soliciting useful feedback
- Has frequent interaction with development and operations people as facilitator and client problem resolver; works on performance problems, upgrades, design reviews, application setup, and implementation

External:

- Has collaborative working relationships outside vendors, which will help to enhance service delivery capabilities
- Develops relationships with professional organizations, peer groups, and industry trade groups to stay current with technology; attends conferences

SAP Functional Analyst (SME)

Dedicated to a specific SAP module or subject matter area (functional, industry, solution), this position is involved in the design and implementation of configurable technology enabled business solutions. Translates end-user system requirements into system designs and solutions, effectively collaborating with business partners, sponsors, executives, users, and the internal IT group. Responsibilities include, among others, defining business and systems strategy, developing system requirements, designing and prototyping, testing, training, defining support procedures and implementation. Responsible for the business process development and configuration in relevant SAP modules. Provides operational support by resolving system issues and implementing approved enhancements. Works closely with customers, colleagues, and other stakeholders to identify requirements and seek opportunities to extend the SAP footprint that will improve business processes and support critical business strategies. Recommends and implements SAP "best practices" solutions, monitoring and managing user requests. Overall, serves as a key resource for day-to-day and on-going activities in the SAP subject domain

Responsibilities

- Works directly with individual users or user groups to proactively provide solutions to a wide range of business and technical problems. Works with IT development resources to coordinate development and successful implementation of new functionality.
- Ability to proactively contribute to an overall IT strategy via direct experience in tactical projects and specific user requirements
- Gathers and documents requirements for system enhancements and communicates those requests to the appropriate IT groups. Seeks solutions for users to increase usage of SAP modules and improve the efficient utilization of those modules.
- Participates in the design, development, testing, implementation, and modifications of programs, changes, and enhancements to SAP systems and custom applications. Includes planning and preparing design proposals, and documenting solutions.
- Defines scope and requirements of new developments to meet changing requirements
- Performs systems analysis and design by meeting with end users and outlining detailed project specifications in order to effectively and efficiently meet business needs and objectives
- Conducts analysis of system specifications based on required business and technical processes. Identifies opportunities to improve system functionality and business process. Develops functional specifications for system changes.
- Develops, modifies and documents SAP configuration\development objects. Analyzes system change requests and provide work estimates. Obtains and documents approval of system changes.
- Ensures complete functionality and that all work meets standards of the IT department and the project
- Effectively implements systems changes and enhancements while meeting or exceeding requirements of each project as outlined by end user specifications.
- Maintains detailed documentation and project files with respect to progress, problems, needed changes, etc., and provides regular reports on such to the Project Leader and/or Systems Manager as requested

- Provides day-to-day user support, as well as drive improved user productivity through developing and implementing new business process and systems solutions.
- Complies with established level of service and support for internal systems to the line organization users.
- Establishes and manages project plans.
- Provides guidance in developing and executing test plans, programs, and materials. Specify and apply testing and quality monitoring procedures. Oversees end-user testing of SAP solutions.
- Help organize user training programs.
- Works closely with other project team and support team members to understand integration between SAP modules. Participates at the departmental level in line organization initiatives, tactics and strategies to act as a liaison from the line organizations to IT for continued development of the internal systems. Interacts with end users during the project cycle
- Provides direction and supervision to team members, as required during the development cycle of assigned projects.
- Assists SAP project manager in scheduling and budget tasks.

Skills and Knowledge

- Possesses a strong working knowledge of SAP technical concepts. Extensive subject matter/SAP module and cross-application technical knowledge
- Detailed understanding of the SAP component area relevant to the job. For example, supply chain processes (e.g. purchasing, receiving, shipping and managing products and materials) combined with knowledge of SAP's Production Planning, Quality Management, Controlling, and Order Management modules, thorough understanding of Inventory Management of Materials Management components, plus an understanding of the products and logistics affecting decisions.
- Knowledge of systems and/or business analysis design concepts. Demonstrated proficiency in the applied use of systems and process analysis tools.
- Thorough understanding of integration amongst core SAP modules
- Ability to facilitate interactive design and functional specification sessions.
- Ability to carry out detailed system design and write specs for development. Capable of performing configuration changes and/or prepare design specifications for ABAP programs
- Strong analytical problem-solving, and conceptual skills for analyzing and evaluating major SAP business requirements of varying complexity. Thorough understanding of all parameters affecting and interfacing with the SAP system
- Experience with interface/dialog programming and complex report development with ABAP Query and Quickviewer. ABAP development skills and tool set knowledge to assess, define, implement, and deliver IT solutions. SAPscript, IDoc's, Workflow, Dialog Development. Smart-Forms, user exits, BAPI's, BADI's, ABAP Objects, BTEs and data dictionary objects
- Ability to diagnose problems and develop and implement. Effectively understand relevant processes so that they can be modeled in internal systems.
- Ability to respond quickly in a rapidly changing business environment
- Ability to translate business processes and requirements into system enhancements; analyze processes for possible future systems improvement; suggest alternative solutions

- Ability to manage small and medium size system enhancement projects; interface with internal customers to identify areas for systems improvement. Define controls, conversion procedures, and systems implementation plans
- Ability to act independently and under very general direction to define, implement, and document SAP system changes in support of business process solutions
- Performs programming/analysis functions by producing structured, maintainable and efficient code. Familiarity with the SAP NetWeaver platform functionality is highly desirable.
- Highly developed interpersonal, written and verbal skills with an ability to express complex technical concepts in business terms. Excellent technical writing and system documentation skills
- Must be a “team player” able to work with others in developing and implementing new processes and enabling systems. Able to work with end user groups to define application needs and identify feasible solutions.
- Proactive, self-motivated with the ability to motivate others
- Demonstrated project management skills.
- A customer-focused service attitude
- Good organizational skills, with the ability to meet objectives

Experience

- Bachelors Degree in business or computer related field or the equivalent experience.
- 8 or more years previous work experience in software and enterprise system development.
- 6 or more years experience in the relevant SAP module and pertinent subject matter, including business analysis, requirements definition and translating them into building SAP systems supported solutions in R/3, 4.6, ECC 5.0/6.0, or NetWeaver environments. Configuration experience in the SAP subject matter area.
- Experience in a business functional role relevant to the relevant to the SAP subject matter area is highly desirable.
- Proven understanding of ABAP programming with debugging skills, with working knowledge of user exits
- Experience developing clear and complete functional specifications and test plans for ABAP programming development.
- At least one full lifecycles of a significant SAP implementation through production status (project identification, feasibility, blueprint/design, configuration, testing, documentation, implementation, training and ongoing support)
- Effective relationship building skills and strong skills in coordination, project management, organizational and time management skills. Ability to prioritize and multitask multiple work assignments in a fast paced environment
- Solid communications skills both verbal and written; strong and outstanding customer service skills
- Action oriented with strong analytical and problem solving skills
- Demonstrated ability to develop and implement customer-focused processes & procedures
- Experience working with all levels of the organization, both technical and non-technical.
- Ability to prioritize and multitask.
- SAP certification in module of subject matter expertise is a plus

SAP modules and skills:

ALE (Application Link Enabling)	MDM (Master Data Management)
AM Asset Management	MDX (Multi-Dimensional Expression Language)
APO Advanced Planner & Optimizer	MI (Mobile Infrastructure)
Auto-ID Infrastructure (SAP RF)	MM (Materials Management)
ASAP (Accelerated SAP)	MRO (Maintenance, Repair and Overhaul)
SAP Basis Components	NetWeaver Applications Server
BI Accelerator	NetWeaver BW (NetWeaver BI)NetWeaver PI (SAP XI)
BPC (Business Objects Planning and Consolidation)	NetWeaver Portals/SAP EP
BSP (Business Server Pages)	NetWeaver Visual Composer
SAP BW (Business Warehouse)	NWDS (NetWeaver Developer Studio)
CA Cross Application	PLM (Product Lifecycle Management)
CAF (Composite Application Framework)	PM (Plant Maintenance)
CCM (Catalog Content Management)	PP (Production Planning)
CE (NetWeaver Composition Environment)	PS (Project Systems)
CFM (Corporate Finance Management)	PSCD (Collection and Disbursement)
CO (Controlling)	Public Sector Management
CO-PA (Profitability Analysis)	PY (Payroll)
CRM (Customer Relationship Management)	QM (Quality Management)
CS (Customer Service)	SAM (Service and Asset Management)
EBP (e-Procurement)	SAP Application Server
EDI	SAP Banking
EHS (Environmental Management)	SAP Business One
EPM (Enterprise Performance Management)	SAP Business Workflow/Webflow
ERP Operations (multi-skills)	SAP Manufacturing
ESA (Enterprise Services Architecture)	SAP Oil & Gas
FI - FSCM (Financial Supply Chain Management)	SAP Retail
FI - Travel Management	SAP Security
FI (Financial Accounting)	SAP Smart Forms
FS (Insurance)	SAP Solution Manager
GRC (Governance/Risk Mgmt/Compliance)	SAP Web Application Server
GTS (Global Trade Services)	SAP xMII
HANA (In-Memory Appliance)	SCM (Supply Chain Management)
HCM	SD - GTS (Global Trade Systems)
HCM ESS/MSS	SD (Sales and Distribution)
IM (Investment Management)	SEM (Strategic Enterprise Management)
IS-U (Utilities)	SM (Service Management)
ITS (Internet Transaction Server)	SRM (Supplier Relationship Management)
KW (Knowledge Warehouse)	Web Dynpro
LES (Logistics Execution System)	WM (Warehouse Management)
LO (Logistics General)	WM - EWM (Extended Warehouse Management)

Working Relationships

Internal:

- Serve as a resource to ABAP programmers, developers, and BASIS Administrators in designing, configuring and implementing an SAP system which supports the company's business and operational needs. Provide leadership and guidance to subordinates.

Job Titles Surveyed – 2011 IT Professional Salary Survey

A. IT INFRASTRUCTURE POSITIONS

Systems Operations

- Vice President–Client, Server and Network Computing Systems
- Director–Client and Network Systems
- Manager–Operation Services (NT/Unix/Linux)
- Sr. Systems Administrator–Transaction Monitors
- Systems Administrator–Transaction Monitors
- PC Desktop Technician

Network Operations

- Director (Sr. Manager) – Network Operations
- Manager–Network Operations
- Sr. Network Technician, LAN/WAN
- Network Technician, LAN/WAN
- Sr. Network Administrator
- Network Administrator

Systems Engineering

- Director–Systems Engineering (NT/Unix/Linux)
- Manager--Systems Engineering (NT/Unix/Linux)
- Sr. Systems Engineer – NT/Unix Operating Systems
- Systems Engineer – NT/Unix Operating Systems

Network Engineering

- Director — Network Engineering
- Manager — Network Engineering
- Sr. Network Engineer - LAN/WAN Systems
- Network Engineer - LAN/WAN Systems

IT Security

- Director, IT Security
- Manager, IT Security
- Security Architect
- Sr. Information Security Analyst
- Security Analyst
- Sr. Security Administrator
- Security Administrator

Database Administration

- Sr. Database Administrator
- Database Administrator
- Sr. Systems Programmer – RDBMS

Database Developer

- Sr. Database Developer
- Database Developer
- Jr. Database Developer

Enterprise Infrastructure Management

- Vice President (Director) - Enterprise Infrastructure
- Manager, Enterprise Infrastructure
- Sr. Infrastructure Engineer/Integrator
- Infrastructure Engineer/ Integrator

Enterprise Messaging Management

- Director – Enterprise Messaging Systems
- Sr. Enterprise Messaging Engineer
- Enterprise Messaging Engineer

Storage/SAN Administration

- Sr. Storage/SAN Administrator
- Storage Administrator

Voice Engineer

- Manager, Voice Engineering
- Sr. Voice Engineer
- Voice Engineer
- Jr. Voice Engineer

B. APPLICATIONS DEVELOPMENT POSITIONS

(also see Data Warehousing/BI, Lotus Notes/Domino, Web/I-net and SAP job families)

Business Application Development

- VP(Director), Corporate Applications
- VP(Director), Business Unit Applications
- Manager, Business Applications Development
- Sr. Business Applications Developer
- Business Applications Developer

Java Developers

- Sr. Java Developer
- Java Developer
- Jr. Java Developer

.NET Developers

- Sr. .NET Developer
- .NET Developer
- Jr. .NET Developer

C. SIX SIGMA

- Master Black Belt
- Black Belt

Job Titles Surveyed – 2011 IT Professional Salary Survey, cont'd.

D. ARCHITECTURE, BUSINESS SYSTEMS ANALYSTS, BUSINESS TECHNOLOGY, e-COMMERCE

IT Architecture

- Director, Architecture
- Manager, Applications Systems Architecture
- Sr. Applications Systems Architect
- Applications Systems Architect
- Information Architect
- Data Architect
- Enterprise Architect

Business Systems Analysts

- Manager, Business Systems Analysis
- Sr. Business Systems Analyst
- Business Systems Analyst

Business Technology

- VP/Director, Business Technology Consulting
- Sr. Business Technology Consultant
- Business Technology Consultant

eCommerce/eBusiness

- VP, E-Commerce
- Director, E-Commerce
- E-Commerce Project Manager/Coordinator
- Sr. E-Commerce Programmer/Analyst
- E-Commerce Programmer/Analyst

E. SAP Family

- Vice President, SAP Program Management
- SAP Project Manager
- SAP Master Data Manager
- SAP Design Architect
- Sr. SAP Business Analyst
- SAP Business Analyst
- SAP Functional Analyst (SME)
- Sr. SAP Configuration Analyst
- SAP Configuration Analyst
- Sr. BASIS Administrator
- BASIS Administrator
- Jr. BASIS Administrator
- Sr. ABAP Developer
- ABAP Developer
- Jr. ABAP Developer

F. Help Desk

- Help Desk Manager
- Sr. Help Desk Analyst/Specialist
- Help Desk Analyst/Specialist

G. Web/Intra/Extranet Positions

- Director, Web Systems
- Manager, Web Systems
- Web Project Manager
- Web Security Manager
- Web Architect
- Sr. Web Designer/Site Builder
- Web Designer/Site Builder
- Sr. Web Engineer
- Web Engineer
- Sr. Web Developer
- Web Developer
- Webmaster — Technical
- Web Site Administrator
- Web Customer Support Specialist

H. Data Warehousing/Business Intelligence Positions

- VP (Director), Data Warehousing/Business Intelligence
- Data Warehouse/BI Project Manager — Processing
- Data Warehouse/BI Project Manager — Decision Support Services
- Data Warehouse/BI Information Security Manager
- Data Warehouse/BI Architect
- Data Warehouse/BI Engineer
- Data Warehouse/BI Programmer
- Data Warehouse/BI Auditor
- Sr. DSS/BI Analyst
- DSS/BI Analyst
- Sr. BI/EIS Analyst
- Sr. DSS/BI Engineer
- Data Warehouse/BI Administrator
- Data Warehouse/BI Management Specialist

Job Titles Surveyed – 2011 IT Professional Salary Survey, cont'd.

I. Lotus Notes/Domino Positions

- Director, Notes/Domino Group
- Notes/Domino Project Manager - Server/ Network
- Notes/Domino Project Manager - Client/Customer Support
- Notes/Domino Architect
- Sr. Notes/Domino Engineer - Server/ Network
- Sr. Notes/Domino Engineer - Client/Customer Support
- Notes/Domino Developer/Programmer
- Notes/Domino Information Security Manager
- Sr. Notes/Domino Analyst
- Notes/Domino Administrator
- Notes/ Domino Quality Assurance Auditor

J. Epic Systems (Healthcare/EMR) Positions

- Epic Project Director
- Epic Project Manager
- Sr. Epic Bridges Interface Analyst
- Epic Bridges Interface Analyst
- Sr. Epic Ambulatory Applications Builder
- Epic Ambulatory Applications Builder
- Sr. Epic Ambulatory Analyst
- Epic Ambulatory Analyst
- Epic Training Manager
- Epic Trainer
- Sr. Epic Cadence Builder/Applications Analyst
- Epic Cadence Builder/Applications Analyst
- Epic Optime Application Analyst
- Sr. Epic Clinical Systems Analyst
- Epic Clinical Systems Analyst
- Epic Cadence Report Writer
- Epic Resolute Hospital Billing

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