

## Database and Systems Series

*In this series:*

<b>Classification</b>	<b>Class Code</b>	<b>Pay Grade</b>	<b>Civil Service</b>	<b>FLSA</b>
<a href="#">Database/Systems Analyst</a>	808303	IT 3	Covered	Non-exempt
<a href="#">Database/Systems Administrator</a>	808305	IT 5	Covered	Non-Exempt
<a href="#">Database/Systems Engineer</a>	808307	IT 7	Covered	Exempt
<a href="#">Database/Systems Professional</a>	808308	IT8	Exempt	Exempt
<a href="#">Database/Systems Architect</a>	808309	IT 9	Exempt	Exempt
<a href="#">Systems Manager I</a>	808318	IT 8	Exempt	Exempt
<a href="#">Systems Manager II</a>	808320	IT 10	Exempt	Exempt

### **Purpose of Series**

This series captures the breadth and depth of work which engages in the design, implementation, analysis, and maintenance of information systems for the collection, storage, and processing of data. Incumbents of this series work in one or more technologies such as server operating systems and virtualization platforms; database platforms and data storage; physical and virtual computing platforms; and web and email resources.



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Database/Systems Analyst	808303	IT 3	Covered	Non-exempt

### **Role Description**

Under general supervision, Database/Systems Analysts are typically assigned variety of tasks requiring analysis of science, engineering, business, and other data processing problems to develop and implement solutions to applications problems and system administration issues. Incumbents perform systems management and integration functions, improve existing computer systems, and review computer system capabilities, workflow, and schedule limitations.

### **Example Functions**

- Analyzing server resource consumption and control user access.
- Applying secure configuration standards and processes to ensure the integrity and security of systems and data.
- Assisting with the administration of technical infrastructure by performing technical maintenance or administration tasks.
- Building an assigned subset of the infrastructure within parameters or a predetermined process.
- Gathering data to monitor system capacity and performance.
- Interacting with vendors of assigned system components for technical support within existing vendor agreements.
- Investigating and exploring new products and technologies relevant to assigned system components.
- Recovering data and restoring to a point in time to maintain continuity of operations.
- Testing and installing assigned systems components.
- Troubleshooting hardware and software problems by analyzing a chain of events and applying technical knowledge following established procedures and standards.
- Supporting the routine backing up, recovering, and troubleshooting of the enterprise data storage locations and their content.
- Supporting disaster recovery efforts at a server or server component level and learning the interdependency and procedural requirements of enterprise level disaster recovery.

### **Requisite Knowledge, Skills, and Experiences**

- Knowledge of database user interface and query software.
- Listening and clarifying skills to form productive relationships with clients and other team members.
- General understanding of server, database, and system components and how they function, interact.



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Database/Systems Administrator	808305	IT 5	Covered	Non-Exempt

Works independently under specified objectives upkeep the day-to-day functions of operating systems, physical and virtual servers, and/or database management systems. Incumbents control user access and coordinate changes to computer databases and other systems.

### **Example Functions**

- Allocating system storage and planning future storage requirements for server systems.
- Backing up and restoring data and server software as well as all data stored by, managed through, and accessed by that software across the enterprise.
- Controlling and monitoring user access to databases, server software, and file systems.
- Creating primary database, server, server software, and/or data storage structures after application developers have designed an application.
- Identifying, investigating, and resolving system hardware and software errors, system performance, capacity, and scalability issues.
- Installing and upgrading server and application tools.
- Maintaining archived data, logs related to server and server software functions, and maintenance and repair records.
- Modifying existing servers and server software and directing programmers and analysts to make requisite changes.
- Monitoring systems and verifying the integrity and availability of hardware, network, and server resources and systems.
- Planning for backup and recovery processes.
- Reviewing system and application logs and verify completion of scheduled jobs, including system backups.
- Troubleshooting and resolving system, application, and/or database issues and errors.
- Managing infrastructure or system software related projects.
- Acting as a lower level of support for other technologies which are primarily supported by database and systems engineers.
- Supporting and maintaining the systems and infrastructure used in backing up, recovering, and troubleshooting enterprise data storage locations and their content.
- Tuning, troubleshooting, and updating as needed the software products and infrastructure components used for enterprise level disaster backup and recovery.

### **Requisite Knowledge, Skills, and Experiences**

- Knowledge and skill to continually improve standard processes for systems engineering.
- Broad understanding and knowledge of data management, restore technologies, and system software.
- Identifies, documents, and implements best practices within assigned technologies.
- Willing to train junior members of the database and systems administrator and analyst team.



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- Understanding of the supporting processes, goals, and components of enterprise level disaster backup and recovery at the enterprise level.



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Database/Systems Engineer	808307	IT 7	Covered	Exempt

Under Administrative Supervision applies depth of knowledge and skill in complex and varied work situations with limited need for direction.

### **Example Functions**

- Approving, scheduling, planning, and supervising the installation and testing of new products, databases, frameworks, and improvements to computer systems.
- Designing and implementing databases and system software configurations to support the needs of the users while ensuring compatibility with other installed software.
- Developing the databases and server systems by defining technical aspects.
- Gathering data pertaining to customer needs, and using the information to identify, predict, interpret, and evaluate system requirements.
- Guiding the database and systems administrators for the effective management of the databases and system software and hardware.
- Planning and installing upgrades of system software to enhance performance.
- Implementing disaster recovery and contingency plans and participating in the development of recovery plans.
- Proposing new technologies, new technical and architectural strategies, and new processes to meet business challenges.
- Ensuring compliance with hardware and software license agreements.
- Engaging in opportunities to learn enterprise-wide architecture and technologies.
- Designing and deploying multiple systems that have enterprise-wide impact.
- Proactively assessing the impact of technology changes on business practices and clients.
- Performing root-cause analysis of information technology system issues to prevent future occurrences.
- Planning for, implementing, troubleshooting, and maintaining the systems and infrastructure used in backing up, recovering, and troubleshooting enterprise data storage locations and their content.
- Tuning, troubleshooting, and updating as needed the software products and infrastructure components used for enterprise level disaster backup and recovery.

### **Requisite Knowledge, Skills, and Experiences**

- Expertise in supporting large-scale 24x7 operational production subsystems including backup, recovery, maintenance, tuning, performance analysis, capacity planning, resource utilization, online reorganization strategy, database utilities, security, and troubleshooting.
- Skilled in training/mentoring and willing to train junior members of the database and systems engineering team.
- Broad understanding and knowledge of information technology project management methodologies such as cost-benefit analysis and decision analysis.



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- Knowledge and skill to continually improve standard processes for financial and risk analysis and systems engineering.
- Understanding of how the various software, procedure, and infrastructure components integrate and are supported to realize the goals of enterprise level disaster backup and recovery.



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Database/Systems Professional	808308	IT 8	Exempt	Exempt

### **Role Description**

The Database/Systems Professional (platform engineer) assures the follow-through of enterprise vision and goal for assigned platforms/systems. Serves as the interface between management and the assigned platforms/systems engineering team. Independently researches and evaluates hardware and software, solutions to issues and challenges, and opportunities for new services. Developing, vetting, and enforcing technical policies and procedures related to assigned platforms. Assures the team contributes to and accomplishes the vision and goals developed and provided by architect and management staff. Directs after-action activities for events affecting assigned platforms. Accountable for operational reporting and resource planning for assigned platforms.

### **Example Functions**

- Provides architect and engineering staff with platform design and functional analysis.
- Collects and provides feedback on capabilities and limitations of assigned platforms/systems and its components.
- Manage the project team, resource needs, facilitate meetings, provide updates to project stakeholders, and provide training, mentoring, and other guidance to members of the project team.
- Responsible for the planning, execution, and finalizing of the platform-wide portions of a project, keeping the project on time, and within the estimated budget.
- Assures vision and directions being proposed meet those of the organization from a technical perspective.
- Ensures planning and tasks performed consider enterprise and service-specific impacts.
- Assign independent research to team members supporting the assigned platform(s).
- Responsible for ensuring that the implementation and functioning of assigned platforms/systems are developed, enhanced, and maintained for optimum operational efficiency across diverse business needs and processes.
- Work with management and legal staff during contract renewals and creation of new contracts related to assigned platforms/systems regarding technical resource needs and consumption.
- Act as an interpretative guide for the engineering staff to help them understand how assigned platforms/systems fit into enterprise vision and direction.

### **Requisite knowledge, Skills, and Experiences**

- Maintains in-depth knowledge of the state business strategies and goals.
- Promote the adoption of modern methods and technologies for assigned platforms.
- Maintain knowledge of how assigned platforms are interdependent with other platforms.
- Project management skills to allow for cross divisional projects to be conducted.



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Database/Systems Architect	808309	IT 9	Exempt	Exempt

### **Role Description**

Performs work without direction. This is an expert technical advisor level. Incumbents demonstrate strategic technical leadership, influence, and expertise that drive the organization's use of technology toward constant improvements. Incumbents represent the highest level of expertise available in state service within the System Engineering domain. Incumbents develop the enterprise information technology architecture direction of the organization and advise management and executive level staff on governance and policy that support forward movement. Incumbents may have extensive decision-making authority and direct the most critical/complex projects.

### **Example Functions**

- Designing strategies for enterprise servers, server software, or storage.
- Developing highly sophisticated technology plans that require integration of multiple technologies while addressing the interrelationships of multiple systems and serving diverse clients.
- Establishing systems to monitor compliance with architectural standards and to ensure technical integrity.
- Integrating new systems and refining system performance and functionality.
- Interacting with senior members of client agencies who understand business requirements and have decision-making authority to influence and advocate for business decisions based on technology capabilities.
- Mentoring and reviewing the work of others engaged in complex technical design and applications.
- Setting standards for systems operations, programming, query processes, and security.
- Acting as a key technical advisor to technology project leaders.
- Providing architectural expertise in the design of proposed technology solutions.
- Negotiating contract terms and conditions with technology vendors and procurement officers.
- Assuring all architecture level changes reflect long-term integration planning and, as needed, migrations of systems, infrastructure, and procedures used for, implementing, troubleshooting, and maintaining the existing systems and infrastructure outcomes.
- Assessing and troubleshooting with other architects the needed integration of all enterprise components during a disaster. Assuring that those managing the systems understand the required interdependencies of their areas of responsibility with the overall enterprise disaster recovery plan including changes that may need to occur in a recovery situation as opposed to normal operations.

### **Requisite Knowledge, Skills, and Experiences**

- Develops a technical vision and leads strategic, statewide architecture planning as it relates to own area of expertise then communicates this vision in a manner that allows others to develop specific plans and standards.
- Anticipates changes and effectively plans future direction of the multiple technologies supported.





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- Knowledge and skill to integrate the organization's goals and objectives into the information technology architecture.

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Systems Manager I	808318	IT 8	Exempt	Exempt

**Role Description**

Supervises and manages a team of database/systems staff who are responsible for technologies such as server operating systems and virtualization platforms; database platforms and data storage; physical and virtual computing platforms; and web and email resources.



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Systems Manager II	808320	IT 10	Exempt	Exempt

**Role Description**

Supervises and manages multiple teams of database/systems staff who are responsible for technologies such as server operating systems and virtualization platforms; database platforms and data storage; physical and virtual computing platforms; and web and email resources.