

STATE OF OHIO (DAS)
CLASSIFICATION
SPECIFICATION

<u>CLASSIFICATION SERIES</u> DATABASE ADMINISTRATION	<u>SERIES NUMBER</u> 6995
<u>MAJOR AGENCIES</u> ALL AGENCIES	<u>EFFECTIVE</u> 6-7-2009

SERIES PURPOSE

The purpose of the Database Administration classification is to create, maintain and support databases and assure access and availability of accurate and reliable data.

Job duty, knowledge, skill, and ability statements at a lower-level are understood to be able to be performed at any higher level.

CLASS TITLE

Database Administration Specialist 1

CLASS NUMBER

69951

PAY RANGE

33

EFFECTIVE

6-7-2009

CLASS CONCEPT

The first level specialist possesses a working technical knowledge of database administration and receives general supervision in order to provide Tier I support to information system users and/or IT staff, assist with data modeling and conduct performance tuning and configuration.

CLASS TITLE

Database Administration Specialist 2

CLASS NUMBER

69952

PAY RANGE

35

EFFECTIVE

6-7-2009

CLASS CONCEPT

The advanced level specialist requires thorough knowledge of database administration and receives direction in order to conduct performance tuning and configuration, create data models and provide technical Tier II database support.

CLASS TITLE

Database Administration Specialist 3

CLASS NUMBER

69953

PAY RANGE

36

EFFECTIVE

6-7-2009

CLASS CONCEPT

The expert level specialist requires extensive knowledge of database design and business intelligence/data warehousing and receives general direction in order to design and implement high availability solutions, perform solutions design, provide technical Tier III database support, develop project plans with project manager or recommend approach through defining tasks and/or leading meetings relating to design, implementation, operation and ongoing maintenance of databases systems.

CLASS TITLE	CLASS NUMBER	B. U.	EFFECTIVE	PAY RANGE
Database Administration Specialist 1	69951	14	6-7-2009	33

JOB DUTIES IN ORDER OF IMPORTANCE (These duties are illustrative only. Incumbents may perform some or all of these duties or other job-related duties as assigned.)

1. Database support.
 - a. Advises and consults with users on accessing various databases and to resolve data conflicts and inappropriate use of data.
 - b. Issues Tier I resolution.
 - c. Promotes system security and awareness by adhering to the Agency's and/or State's IT security policy(s) and standards.
2. Data modeling.
 - a. Assists with data model design.
 - b. Implements physical data models.
 - c. Assists with tuning a single RBMS system on a single platform.
 - d. Assists with writing platform specific code.
3. Performance tuning and configuration.
 - a. Provides performance tuning for query language statements.
 - b. Reads and interprets query plans.
 - c. Provide monitoring using vendor supplied and 3rd party utilities.
4. Database backup/recovery.
 - a. Restores from disaster recovery plan.
 - b. Monitors disaster recovery plan.
5. Data migrations, business process monitoring.
 - a. Designs and implements processes for the efficient transfer of data.
 - b. Monitors data transfer processes.
 - c. Resolves data conflicts and inappropriate use of data.
 - d. Provides ETL and data warehouse support.
 - e. Transfers data for data warehouse, build tables and load scripts.
 - f. Writes platform specific code for data migrations.
6. Database security.
 - a. Sets security and validates all updates through database connections.
 - b. Collaborates with system administrator to set table access security.
7. High availability.
 - a. Monitors cluster parameters for high performance.
 - b. Resolves problems and issues.
8. Installation, patching, versioning patching configuration.
 - a. Performs database setup and configuration to support application development projects (both purchased and custom) including database software installation, database creation, schema setup, file layout, and migration scripting using established methodology and process.
9. Mentoring.
 - a. Receives orientation related to mentorship and applies as necessary (e.g., definition, purpose, strategies, and evaluation techniques).

MAJOR WORKER CHARACTERISTICS

Knowledge of: oral and written communication tools and techniques, customer support and personal service, technical writing and documentation practices, technology design, mathematic principles relative to assigned area in IT, IT principles, methods and practices in assigned specialty area, state and agency policy, procedures and applicable laws*, vision, mission and goals of agency*.

Skill for: reading comprehension, speaking, service orientation, troubleshooting, critical thinking, and using data recovery tools and techniques.

Ability to: prepare meaningful, accurate and concise reports, and stay abreast of current technologies in area of IT assigned.

(*)Developed after employment.

MINIMUM CLASS QUALIFICATIONS FOR EMPLOYMENT

Education Core undergraduate program in Computer Science or Information Systems or equivalent work experience.

AND
Experience Minimum 2 years combined work experience in any combination of the following: database administration providing Tier I support to information system users and/or IT staff, assisting with data modeling and conducting performance tuning and configuration.

Note: the official position description on file with the designated agency is to reflect, in the minimum acceptable characteristics, the required technical experience. Only those applicants possessing the required technical experience listed in the position description are to be considered for any vacancies posted. The vacancy/job posting should also only list the required technical experience commensurate with the position in question.

TRAINING AND DEVELOPMENT REQUIRED TO REMAIN IN THE CLASSIFICATION AFTER EMPLOYMENT

UNUSUAL WORKING CONDITIONS

<u>CLASS TITLE</u>	<u>CLASS NUMBER</u>	<u>B. U.</u>	<u>EFFECTIVE</u>	<u>PAY RANGE</u>
Database Administration Specialist 2	69952	14	6-7-2009	35

JOB DUTIES IN ORDER OF IMPORTANCE (These duties are illustrative only. Incumbents may perform some or all of these duties or other job-related duties as assigned.)

1. Performance tuning and configuration.
 - a. Tunes DBMS systems running on a single platform.
 - b. Performs load testing and scalability.
2. Database support.
 - a. Issues Tier II resolution.
3. Data modeling.
 - a. Designs and maintains various versions of data models.
 - b. Participates in Change Review Board.
 - c. Creates ERD (entity relation diagram).
 - d. Conducts data normalization.
 - e. Writes platform specific code.
4. Data migrations, business process monitoring.
 - a. Writes platform specific code for data migrations.
5. High availability.
 - a. Monitors load balance.
 - b. Tunes cluster parameters for high performance.
 - c. Resolves problems and issues.
6. Reporting business intelligence (warehousing).
 - a. Monitors and tunes data warehousing process.
 - b. Supports business intelligence activity.
 - c. Monitors and tunes business intelligence activity and performance.
7. Database backup/recovery.
 - a. Designs disaster recovery plan.
 - b. Restores malicious deletions.
 - c. Archives backup and restores.
 - d. Implements disaster recovery plan.
8. Research product enhancements and capabilities.
 - a. Stays current with emerging technologies and, as needed, thoroughly investigates tests, evaluates, & defines a business case for any candidates new technologies related to meeting customer requirements.
 - b. Stays current with new versions and patches.
 - c. Conducts proof of concept.
9. Develop standards, best practices.
 - a. Implements documentation of installation procedures, monitoring procedures, security policies, configuration changes migration procedures, and best practices.
10. Business analyst.
 - a. Works closely with clients, business analysts (if available), system programmers, and application developers to define and resolve information flow and content issues.
 - b. Helps to transform business requirements into environment specific databases.
 - c. Develops database strategies to support business needs.
11. Project planning.
 - a. Develops knowledge of principles, theories, practices and techniques for project planning.
12. Mentoring.
 - a. Answers questions and presents informal mentorship opportunities to peers and/or lower-level staff via conversation, observation or technical documentation.

MAJOR WORKER CHARACTERISTICS

Knowledge of: oral and written communication tools and techniques, customer support and personal service, technical writing and documentation practices, technology design, mathematic principles relative to assigned area in IT, IT principles, methods and practices in assigned specialty area, state and agency policy, procedures and applicable laws*, vision, mission and goals of agency*, systems performance management, IT lifecycle concepts, project management principles and methods, develop system specific specifications, back-up and recovery procedures, interrelationships of multiple IT specialties, database management principles and methodologies for data modeling.

Skill for: reading comprehension, speaking, service orientation, troubleshooting, critical thinking, using data recovery tools and techniques, complex problem solving, judgment and decision making, assuring quality, identifying and specifying business requirements, lead work, and database analysis and evaluation.

Ability to: prepare meaningful, accurate and concise reports, stay abreast of current technologies in area of IT assigned provide expert technical advice, guidance, and recommendations to management and other technical specialists on critical IT issues, and define problems, collect data, establish facts and draw valid conclusions.

(*)Developed after employment.

MINIMUM CLASS QUALIFICATIONS FOR EMPLOYMENT

Education Core undergraduate program in Computer Science or Information Systems or equivalent work experience.

AND
Experience Minimum 2 years combined work experience in any combination of the following: conducting performance tuning and configuration, creating data models and providing technical Tier II database support including 2 years technology related work experience as specified by the agency position description and vacancy/job posting.

Note: the official position description on file with the designated agency is to reflect, in the minimum acceptable characteristics, the required technology related experience. Only those applicants possessing the required technology related experience listed in the position description are to be considered for any vacancies posted. The vacancy/job posting should also only list the required technology related experience commensurate with the position in question.

TRAINING AND DEVELOPMENT REQUIRED TO REMAIN IN THE CLASSIFICATION AFTER EMPLOYMENT

UNUSUAL WORKING CONDITIONS

CLASS TITLE	CLASS NUMBER	B. U.	EFFECTIVE	PAY RANGE
Database Administration Specialist 3	69953	14	6-7-2009	36

JOB DUTIES IN ORDER OF IMPORTANCE (These duties are illustrative only. Incumbents may perform some or all of these duties or other job-related duties as assigned.)

1. Design and implement high availability solutions.
 - a. Designs/plans cluster nodes hardware selection and recommendations.
 - b. Configures/sets-up cluster nodes, setup interconnects, configure cluster-aware storage.
 - c. Installs cluster ware and DBMS software on all nodes.
 - d. Monitors load balance, tune cluster parameters for high performance.
 - e. Configures Standby Servers.
 - f. Configures and implement log shipping.
 - g. Configures and implement replication.
2. Solutions Design.
 - a. Works with IT Architecture staff, CIO and/or IT Managers to design solutions that meet agency requirements.
 - b. Assists analysis of the solution design's business case.
 - c. Authors portions of the solution business case.
3. Database support.
 - a. Issues Tier III resolution.
4. Reporting business intelligence.
 - a. Understands business intelligence data needs.
 - b. Defines the data warehouse/business intelligence design.
 - c. Implements data warehouses and data marts.
 - d. Implements business intelligence tools and user interfaces.
 - e. Implements enterprise reporting.
 - f. Implements management dashboards and scorecards.
 - g. Implements analytic applications.
 - h. Replicates and transform data for business intelligence.
5. Develop standards/best practices.
 - a. Creates documentation of installation procedures monitoring procedures, security policies, configuration changes, migration procedures and best practices for development teams.
6. Performance tuning and configuration.
 - a. Conducts performance tuning system configuration running on multiple platforms.
 - b. Tunes data manipulation model.
7. Data migrations, business process monitoring
 - a. Designs standards for the exchange of data between systems, including data security models
8. Data modeling.
 - a. Works with multidimensional models.
9. Business analyst.
 - a. Develops database strategies to support business needs.
10. Project planning.
 - a. Applies principles, theories, practices and techniques of project planning.
11. Mentoring.
 - a. Plans and conducts formal mentorship activities for peers and/or lower-level staff via verbal instruction or technical documentation.

MAJOR WORKER CHARACTERISTICS

Knowledge of: oral and written communication tools and techniques, customer support and personal service, technical writing and documentation practices, technology design, mathematic principles relative to assigned area in IT, IT principles, methods and practices in assigned specialty area, state and agency policy, procedures and applicable laws*, vision, mission and goals of agency*, systems performance management, IT lifecycle concepts, project management principles and methods, develop system specific specifications, back-up and recovery procedures, interrelationships of multiple IT specialties, database management principles and methodologies for data modeling, database management principles and methodologies for data structures, warehousing, transaction, and high availability processing.

Skill for: reading comprehension, speaking, service orientation, troubleshooting, critical thinking, using data recovery tools and techniques, complex problem solving, judgment and decision making, assuring quality, identifying and specifying business requirements, lead work, database analysis and evaluation, developing and interpreting policy and strategies governing the planning and delivery of IT services.

Ability to: prepare meaningful, accurate and concise reports, stay abreast of current technologies in area of IT assigned provide expert technical advice, guidance, and recommendations to management and other technical specialists on critical IT issues, and define problems, collect data, establish facts and draw valid conclusions.

(*)Developed after employment.

MINIMUM CLASS QUALIFICATIONS FOR EMPLOYMENT

Education Core undergraduate program in Computer Science or Information Systems or equivalent work experience.

AND

Experience Minimum 4 years combined work experience in any combination of the following: designing and implementing high availability solutions, performing solutions design, providing technical Tier III database support, developing project plans with project manager or recommending approach through defining tasks and/or leading meetings relating to design, implementation, operation and ongoing maintenance of databases systems including 2 years technology related work experience as specified by the agency position description and vacancy/job posting.

Note: the official position description on file with the designated agency is to reflect, in the minimum acceptable characteristics, the required technology related experience. Only those applicants possessing the required technology related experience listed in the position description are to be considered for any vacancies posted. The vacancy/job posting should also only list the required technology related experience commensurate with the position in question.

TRAINING AND DEVELOPMENT REQUIRED TO REMAIN IN THE CLASSIFICATION AFTER EMPLOYMENT

UNUSUAL WORKING CONDITIONS