

STATE OF OHIO (DAS)
CLASSIFICATION
SPECIFICATION

<u>CLASSIFICATION SERIES</u> DATABASE ADMINISTRATION	<u>SERIES NUMBER</u>
<u>MAJOR AGENCIES</u> ALL AGENCIES	<u>EFFECTIVE</u>

SERIES PURPOSE

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

<u>CLASS TITLE</u> Database Administration Specialist 1	<u>CLASS NUMBER</u>	<u>PAY RANGE</u>	<u>EFFECTIVE</u>
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CLASS CONCEPT

Under general supervision the first level specialist possesses a working knowledge of database administration in order to perform analytical analysis, problem resolution and technical guidance as it relates to database administration.

<u>CLASS TITLE</u> Database Administration Specialist 2	<u>CLASS NUMBER</u>	<u>PAY RANGE</u>	<u>EFFECTIVE</u>
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CLASS CONCEPT

Under direction, the advanced specialist possesses thorough knowledge of database administration in order to provide technical leadership and support, including, but not limited to, design and implementation of databases.

<u>CLASS TITLE</u> Database Administration Specialist 3	<u>CLASS NUMBER</u>	<u>PAY RANGE</u>	<u>EFFECTIVE</u>
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CLASS CONCEPT

Under general direction, the expert level specialist requires extensive knowledge of either complex/large database design, business intelligence/data warehousing or high availability in order to mentor others and act as project leader by planning, administering and coordinating all aspects and activities relating to design, implementation, operation and ongoing development of large and complex databases systems.

CLASS TITLE

Database Administration Specialist 1

CLASS NUMBER**B. U.****EFFECTIVE****PAY RANGE**

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 backup/recovery
 - a. Restores from DR Plan
 - b. Monitors DR Plan
2. Data modeling
 - a. Assists with data model design
 - b. Implements physical data models
 - c. Assists with tuning a single RDBMS system on a single platform
3. Database support
 - a. Supports one or more databases of low complexity (complexity defined by database size, technology used and system feeds and interfaces) with single or concurrent users, ensuring integrity
 - b. Advises and consults with users on accessing various databases and to resolve data conflicts and inappropriate use of data
 - c. Provides issue resolution at Tier 1
 - d. Assists to ensure system(s) security and promotes security awareness
4. Performance tuning and configuration
 - a. Provides performance tuning of simple standard query language statements
 - b. reads and interprets query plans
5. Data migrations, business process monitoring
 - a. Designs and implements processes for the efficient transfer of small amounts 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
6. Database security
 - a. Sets security and validate all updates through database connections for small databases
 - b. Collaborates with system administrator to set table access security for small databases
7. High availability
 - a. Monitors cluster parameters for high performance
 - b. Performs problem and issue resolution
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

MAJOR WORKER CHARACTERISTICS

(*)Developed after employment.

MINIMUM CLASS QUALIFICATIONS FOR EMPLOYMENT

-Or equivalent of Minimum Class Qualifications For Employment noted above.

TRAINING AND DEVELOPMENT REQUIRED TO REMAIN IN THE CLASSIFICATION AFTER EMPLOYMENT**UNUSUAL WORKING CONDITIONS**

CLASS TITLE

Database Administration Specialist 2

CLASS NUMBER**B. U.****EFFECTIVE****PAY RANGE****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 a single RDBMS system running on a single platform
 - b. Performs load testing and scalability
 - c. Provides performance tuning of complex standard query language statements
 - d. Reads and interprets query plans
2. Database support
 - a. Supports one or more databases of medium to high complexity (complexity defined by database size, technology used and system feeds and interfaces) with multiple concurrent users, ensuring high availability and integrity across all the database servers in the enterprise
 - b. Advises and consults with users on accessing various databases and to resolve data conflicts and inappropriate use of data
 - c. Issues resolution Tier 1 and 2
 - d. Assists to ensure system(s) security and promotes security awareness
3. Data modeling
 - a. Designs and maintains versions of small and medium data models
 - b. Participates in Change Review Board
 - c. Creates ERD (entity relation diagram)
 - d. Conducts data normalization
 - e. Assists with data model design
 - f. Implements physical data models
4. Database security
 - a. Sets security and validates all updates through database connections for small, medium and large databases (in size and complexity)
 - b. Collaborates with system administrator to set table access security for small, medium and large databases (in size and complexity)
5. Data migrations, business process monitoring
 - a. Designs and implements processes for the efficient transfer of small to medium amounts of data
 - b. Resolves data conflicts and inappropriate use of data
6. High availability
 - a. Monitors load balance
 - b. Tunes cluster parameters for high performance
 - c. Resolves problems and issues
7. 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
8. Database backup/recovery
 - a. Designs DR plan
 - b. Restores malicious deletions
 - c. Restores for DR plan
 - d. Archives backup and restores
 - e. Implements DR plan
9. Research produce 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
10. Develop standards, best practices
 - a. Implements documentation of installation procedures, monitoring procedures, security policies, configuration changes migration procedures, and best practices
 - b. Acts as a mentor for lower level DBAs
11. 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
12. Project management
- a. Uses principles, theories, practices and techniques of project management in work

MAJOR WORKER CHARACTERISTICS

(*)Developed after employment.

MINIMUM CLASS QUALIFICATIONS FOR EMPLOYMENT

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TRAINING AND DEVELOPMENT REQUIRED TO REMAIN IN THE CLASSIFICATION AFTER EMPLOYMENT

UNUSUAL WORKING CONDITIONS

CLASS TITLE

Database Administration Specialist 3

CLASS NUMBER**B. U.****EFFECTIVE****PAY RANGE****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. Design/plan cluster nodes hardware selection and recommendations
 - b. Configure/setup cluster nodes, setup interconnect, configure cluster-aware storage
 - c. Install cluster ware and RDBMS software on all nodes
 - d. Monitor load balance, tune cluster parameters for high performance
 - e. Problem and issue resolution
 - f. Configure Standby Servers
 - g. Configure and implement log shipping
 - h. Configure and implement replication
2. Database support
 - a. Supports many databases of high to medium complexity (complexity defined by database size, technology used and system feeds and interfaces) with multiple concurrent users, ensuring high availability and integrity across all the database servers in the enterprise
 - b. Issue resolution Tier 3
 - c. Assists to ensure system(s) security and promotes security awareness
3. Reporting business intelligence
 - a. Understand business intelligence data needs
 - b. Define the data warehouse/business intelligence architecture
 - c. Implement data warehouses and data marts
 - d. Implement business intelligence tools and user interfaces
 - e. Implement enterprise reporting
 - f. Implement management dashboards and scorecards
 - g. Implement analytic applications
 - h. Replicate and transform data for business intelligence
 - i. Monitor and tune data warehousing process
 - j. Support business intelligence activity
 - k. Monitor and tune business intelligence activity and performance
4. Develop standards/best practices
 - a. Creating documentation of installation procedures monitoring procedures, security policies, configuration changes, migration procedures and best practices for development teams
 - b. Implement documentation of installation procedures, monitoring procedures, security policies, configuration changes, migration procedures and best practices
 - c. Act as mentor for lower level DBAs
5. Research product enhancements and capabilities
 - a. Stay current with emerging technologies and, as needed, thoroughly investigate, test, evaluate, define a business case for any candidates new technologies relating to meeting customer requirements
 - b. Stay current with new versions and patches
 - c. Conduct proof of concept
6. Performance tuning and configuration
 - a. Performance tune system configuration of multiple RDBMS systems running on multiple platforms
 - b. Perform load testing and scalability
 - c. Tune data manipulation model
 - d. Provide advanced performance tuning of complex standard query language statements
7. Data migrations, business process monitoring
 - a. Design and implement processes for the efficient transfer of large amounts of data
 - b. Design standards for the exchange of data between systems, including data security models
 - c. Resolve data conflicts and inappropriate use of data
8. Data modeling
 - a. Design and maintain versions of large data models
 - b. Work with multidimensional models
 - c. Participate in Change Review Board
 - d. Create ERD (entity relation diagram)
 - e. Conduct data normalization

- f. Implement physical data models
- 9. Business analyst
 - a. Work closely with clients, business analysts (if available), system programmers, and application developers to define and resolve information flow and content issues
 - b. Help to transform business requirements into environment specific databases
 - c. Develop database strategies to support business needs
- 10. Database backup/recovery
 - a. Design DR plan
 - b. Restore malicious deletions
 - c. Restore from DR plan
 - d. Archiving backup and restore
 - e. Implement DR plan
- 11. Project management
 - a. Uses the principles, theories, practices and techniques of project management in work
- 12. Database security
 - a. Set security and validate all updates through database connections for small, medium and large databases
 - b. Collaboration with system administrator to set table access security for small, medium and large databases

MAJOR WORKER CHARACTERISTICS

(*)Developed after employment.

MINIMUM CLASS QUALIFICATIONS FOR EMPLOYMENT

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UNUSUAL WORKING CONDITIONS