**NORTH DAKOTA**
**CLASS DESCRIPTION**
ND Human Resource Management Services
Phone: (701) 328-3290

Class Code(s): 0161
0162
0163

## SYSTEMS ADMINISTRATOR

SCOPE OF WORK:

Work involves providing support and maintenance for a variety of operating systems and servers through installation, configuration, testing, deployment, monitoring, and troubleshooting of system software and hardware to ensure efficient functioning.

DUTIES PERFORMED AT ALL LEVELS:

- Assist in identifying software and hardware requirements; evaluate hardware and software products and technologies and make recommendations for implementation.
- Install and configure operating systems and enterprise application software, hardware, and peripherals.
- Research and assist with applying updates and patches recommended and/or provided by vendors; manage the implementation of updates and patches; upgrade hardware including hard drives, memory, cards, etc.
- Monitor and analyze system performance data and tune system for optimum performance by utilizing server management utilities; identify and implement measures to monitor system functionality and availability; make recommendations for improvement.
- Organize, configure, and troubleshoot network resources; manage user rights and security.
- Implement and apply backup solutions and security standards to ensure data integrity, protection, and recovery.
- Troubleshoot, research, analyze, document, and resolve technical problems.
- Develop and maintain documentation and technical diagrams for support operations and staff training purposes.
- Establish and maintain working relationships with hardware/software vendors.

NOTE: The duties listed are not intended to be all-inclusive. Duties assigned any individual employee are at the discretion of the appointing authority.

### SYSTEMS ADMINISTRATOR I                    0161
#### GRADE K

LEVEL DEFINITION:

Work at this level is considered to be fully functioning and primarily involves duties associated with server installation and maintenance.

ADDITIONAL DUTIES PERFORMED AT THIS LEVEL:

- None.

MINIMUM QUALIFICATIONS:

Requires a bachelor's degree in computer science, computer or management information systems, or a closely related field that included computer science coursework, and three years of work experience that included providing application server or desktop support.  Additional work experience as described may substitute for up to two years of the education requirement on a year-for-year basis.

## SYSTEMS ADMINISTRATOR II                    0162
### GRADE L

LEVEL DEFINITION:

Work at this level involves determining the impact of changes to systems, thereby requiring a greater level of analysis than that of the I level.

ADDITIONAL DUTIES PERFORMED AT THIS LEVEL:

- Conduct business analysis and make recommendations for appropriate technical solutions; assist in development of cost estimates.
- Assist in designing technical architecture to meet requirements for functionality, availability, security, and business continuity.
- Determine required hardware and software upgrade requirements; analyze impact of functionality changes, availability, security, and business continuity requirements.
- Write and present technical articles and whitepapers; provide presentations on technical issues.
- Provide direction and future vision of technology by researching new technologies, advanced system functionality, and industry trends; developing proof of concept solutions; providing leadership in enterprise architecture and other technical committees; participating in development of standards and policies; and providing technical information, analysis, and recommendations to leadership.
- Develop, train, and mentor internal and external staff.

MINIMUM QUALIFICATIONS:

Requires a bachelor's degree in computer science, computer or management information systems, or a closely related field that included computer science coursework, and three years of work experience providing support, administration, and

implementation of application servers.  Additional work experience as described may substitute for up to two years of the education requirement on a year-for-year basis.

## SYSTEMS ADMINISTRATOR III          0163
### GRADE N

LEVEL DEFINITION:

Work involves providing expert-level system administration for the enterprise or for large agency-specific applications impacting a significant number of users and substantial value of hardware and software.  Additionally, work may involve management of system administration staff.

ADDITIONAL DUTIES PERFORMED AT THIS LEVEL:

- Identify software and hardware requirements for the enterprise.
- Develop and implement migration plans; manage migration projects.
- Work with hardware and software vendors regarding product vision, direction, and support.
- Provide recommendations on design of technical architecture and security standards to meet system requirements.
- Develop cost estimates.
- Lead development of standards and policies.
- Analyze performance data for planning changes to infrastructure.
- May manage system administration staff and set goals and objectives of the work unit.

MINIMUM QUALIFICATIONS:

Requires a bachelor's degree in computer science, computer or management information systems, or a closely related field that included computer science coursework, and four years of work experience providing support, administration, and implementation of a wide variety of application servers.  Additional work experience as described may substitute for up to two years of the education requirement on a year-for-year basis.

Eff. Date: 10/74 – Class 0165 Technical Services Specialist (one level)
Deleted: 8/77 – Replaced with 0161-0162 - Same title, two levels
Rev. 4/79 – Rewritten; added third level
Rev. 4/92 – Rewritten; factor changes
Rev. 8/96 – Rewritten in current format
Rev. 3/09 – Revised title, scope, duties, and minimum quals
Rev: 7/12 – Conversion to Hay System